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AND OF THE

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INDIANA SCHOOL JOURNAL.

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No. 1.

SHOULD RELIGION BE TAUGHT IN THE PUBLIC SCHOOL? IF SO, HOW? *

A "SYMPOSIUM." *Geo. P. Brown.*

[The above questions were sent to a number of leading educators with a request for a short article on the same, and the following is the result. No subject can be of more vital importance to teachers, and doubtless a great majority of readers will *welcome* a number of the Journal largely devoted to the discussion of it.—ED.]

MR. EDITOR:—Since you limit me to a thousand words, I have no time to build approaches to the bridge I propose to construct over the gulf that separates the opposing opinions in this ever recurring controversy. I am compelled to plunge at once *in medias res* and finish what I have to say in short order.

"Shall religion be taught in the American public school?" I would answer, "Yes: in every school and everywhere that teaching is done." But this depends (1) upon what is meant by *religion*, and (2) what is the function of the American public school. St. James has said that "pure and undefiled religion is to visit the fatherless and the widow in their affliction, and keep oneself unspotted from the world." But it may be objected that St. James did not live in the nineteenth century, and is not an accepted authority in definition. That he has described one of the results of religion,—not religion. Conceding the validity of this objection, we will appeal to Webster's Dictionary, a present accepted authority in Indiana, and proceed with our analysis in the light of the definitions there given us. We open the book and are im-

mediately confronted with the discovery that this word *religion* is employed to name two different things. One is evidently religion *the thing*, and the other, religion *the form*. Religion *the thing* is defined as "the recognition of God as an object of worship, love, and reverence." Religion *the form* is (1) "any *system* of faith and worship, (intellectual form, or theology); and (2) "the rites and services of religion," (objective form). Now I assume that it is religion *the thing* and not religion *the form* that is referred to in this first question propounded. (I will stop here long enough to say, that my method of treating this subject will be by an analysis of terms employed in accepted definitions, and an appeal to the common consciousness of mankind when definitions fail.)

Recurring to the above definition of religion *the thing*, we discover two terms, "worship" and "God," that do not mean the same thing to all intelligent persons. The other words bear a meaning substantially the same to all.

What is "worship"? Referring to our standard, we again find worship *the form* and worship *the thing*. Worship *the form* is "to perform religious service." Worship *the reality* is "to reverence with supreme respect and veneration." Substituting this meaning for "worship" in the definition of religion, and we find religion to be "the recognition of God as an object of supreme reverence and love." All persons give substantially the same interpretation to the words in this definition, with the exception of the word "God." This word too, it will be found upon reflection, performs the double office of naming a *form* and a *substance*. Our Dictionary does not help us much here. That it is not certain whether the word itself meant originally "goodness" or "lord and ruler." It gives us as synonyms, "supreme ruler" and "creator," the latter of which points to a meaning that is common to the race. Again we assume that if we can discover a conception that is common to the race, and can find a term that will express that conception, substantially, to all, we may substitute that in our original definition.

The pivotal question at this point, upon which the final answer to your question seems to turn is, whether the common intelligence of the race recognizes the existence of a *cause* of things.

What has been the bottom meaning in ages past, and what is the bottom meaning now of "Ormuzd," "Jehovah," "Zeus," "Jupiter," "Woden," "God," "The Absolute," "Law," "Supreme Order," "The Power that makes for Righteousness," "Persistent Force," "Totality of Conditions," "Mind," "Matter," when used to name this Ultimate to which thought invariably leads? We hold that when intelligently used in every age, they have involved the idea of the *cause* of both nature and man. Our only proof here must be an appeal to the consciousness and reflection of the reader.

We shall assume this to be true, and make another substitution in our original definition of religion, which now becomes "the recognition of the *ultimate cause* of things as an object of supreme reverence and love."

Some are now ready to cry out that by making "Persistent Force" or "Law" synonymous with God, or ultimate cause, we have abstracted all idea of personality from this object, and by so doing have made reverence and love impossible. But we see it not so.

It will, we think, be evident, upon reflection, that this "Law," or "Persistent Force," or "Ultimate Cause" must be both self-conscious and intelligent; for has it not produced self-conscious and intelligent beings? The cause can contain more in it than is manifest in the effect, but not less. So this ultimate cause must have the self-consciousness and intelligence of man,—his personality,—whatever other or greater attributes he may possess.

Or, the argument may be stated differently. This ultimate cause must be *free*, otherwise it is itself an effect and not the ultimate cause. Science proclaims that this cause acts according to fixed laws of mathematical exactness. It must therefore be consciously intelligent, for it must be impossible for it to act freely according to fixed law, without knowing this law to which its acts conform.

That this being is worthy of supreme reverence and love, it is the first and last duty of education to teach. For, being the ultimate cause, he is the *source* of all that is true and beautiful and good. The attainment of these is the end of all educational en-

deavor. The human mind from its very nature, must reverence such a being.

* * * * *

If religion should be taught, should this be done in the public schools? This can best be answered by determining what is the function of these schools. If it is preparation for citizenship merely, then it may be doubted whether religion belongs to them; unless it be maintained that as complete a preparation is demanded for citizenship, as for all the duties of life. In that case the verbal limitation of their function to citizenship is misleading, for there are many excellent *citizens* that are not excellent men. It is the doctrine of this essay, that the school was created as an aid to the family in preparing the child for intelligent self-directive activity in *all* the institutions of civilization. Whatever knowledge and training is of common application to all these institutions should have a place in the public school. This much the school should do as a common preparation for life, whatever other and special education it may be called upon to confer. The co-ordinate and cardinal institutions of civilization are the family, the state, the church, and business. Who questions that an important element in an adequate preparation for all these, is the instilling of a spirit of reverence for what is highest and best? Goethe would have children taught *three degrees* of reverence, so important does he regard the early exercise of this part of their nature. Shall not the public school teach even one;—reverence for the highest?

If it shall be admitted that religion, as defined, has a place in the public schools, the second question presents itself: *How* shall it be taught? We might answer briefly,—“In a rational way.” But in searching for this rational way we must continually bear in mind that it is religion *the thing* and not religion *the form* that the schools are to teach. It is *religious forms* that people quarrel about; not *religion*.

The public school should adopt such forms as will meet with common approval by those who support and patronize them. These will not be the same for all schools. Were the people all Roman Catholics, the form employed by that church in teaching reverence and love to the highest would be admissible, and probably the best. This is used in France, where all are Catholics,

with good results. Were they all Lutheran Protestants, then the forms of this church might be adopted, as they are in Germany. Were they all members of the Church of England, then that form would seem to be the best. Were they all Jews, then the Jewish form. Were they all Free-thinkers, then their form. Only let us insist upon education in *reverence*, and not merely in its *form*.

But were the community a combination of some, or of all of these, a form should be adopted that would not offend the consciences of any. For be it constantly kept in mind, that the consciences of people are more tender in regard to their *forms* of religious observances, than in regard to *religion* itself. Or, differently stated, people do not wait to determine whether it is not the same thing that all are seeking under these different forms, but conclude that difference in *form* must involve essential difference in the *thing*. In all such communities special forms of worship should be left to the homes, and to the particular churches which these homes compose.

Extemporaneous or ritualistic prayer has no *necessary* relation to the highest success in teaching true religion in the public school. Neither has the reading of the Bible at stated periods. Nor have any of the "religious sanctions," as they are called. The teacher who is determined to pursue his own form whatever may oppose, generally cares more for his own will than for religion. It is himself and not the highest that he "reverences and loves." Some teachers are like some other people; they have learned to reverence certain forms, and can not adopt others without feeling pangs of conscience. This is unfortunate. We know of no remedy other than an increase in wisdom.

The line upon which people divide, we repeat, is the *form* of religion, chiefly. Of course every one knows that some include as essentials ideas what others reject. But all hold to what is expressed in our definition. Those who do not may be counted out without violence to a rational decision of this question. They are counted out, generally, everywhere else.

There is no subject of study that is not filled with promptings to revere the being whose thought it is. What is the invariable

order of the mathematics, even, but the never changing thought of their great architect? What may be the result of the study of science, in cultivating a reverential spirit, may be seen in Darwin, and Tyndall, and Agassiz. Every truth of science may be taught as related to its ultimate cause. Must be so taught, indeed, if it shall be completely taught. *To think* is to relate things; and the final relation of everything is that of cause to effect. Every subject of study is full of appeals to reverence, were the ear attuned to hear. There is no sort of school study that is not crowded with finger-boards all along its way pointing to the Supreme Cause for its final explanation. What is needed is the teacher who can hear these appeals, and see these finger-boards. Then a spirit of reverence will pervade the atmosphere in which he moves, the school will breathe it in, and religion will be taught, even if a Protestant, or Catholic, or Jewish prayer is never spoken. The life of the teacher is prayer, sermon, and benediction. Without this spirit, religious forms are but sounding brass and tinkling cymbal; with it, they are unnecessary, though they may be very helpful.

GEO. P. BROWN,

Editor Illinois School Journal.

Q.

Should Religion be Taught in the Public School? If so, How?
In discussing these questions, of course, the first thing to settle is the content of the word *religion*. To very many, on hearing this word, the concept that will respond in the mind will be the dogmas, catechisms and practices of this, that, or the other church, or body of a religious faith, or profession. As our public schools are constituted, we must find some other meaning for the word, or our answer to the first question must be in the negative. This is too clear to need discussion. Although there are not wanting those who with even this understanding of the word claim that religion should be taught in the public schools, or else the public school system should be abandoned.

We now call attention to a remarkable fact, namely, that three ideas seem to be well nigh universal among men. We will not claim, as some do, that they are intuitive; but history shows their prevalence to such an extent that we think we may say they are common to mankind.

The first is the idea of *God*; that is, in its most general sense, the belief in some being, or beings, of knowledge and power to whom we stand in vital relations. We have not space to prove the universality of this belief; it does not seem necessary to offer proof to intelligent men.

The second idea is that of *Responsibility*, or accountability to some one other than ourselves. If this be not so, how can we account for the sense of guilt shown in all ages, by prayers and sacrifices?

The third idea is that of *Immortality*; that is, of continued existence after this life in a state which is to be determined, or influenced at least, by the life that now is. As proving the universality of this idea, we note, in addition to the facts of history, the longing for an after life, or partial expectation of it, shown even by those who avow their lack of faith in such a life.

Now, if these ideas are universal among men, that fact points towards, or rather proves as we think, the further fact that they belong essentially to human nature. And it seems to us that a right regard to these universal ideas constitutes a religion of no mean kind. In other words, man is by his very nature furnished with a need or a capacity for religion; and any education which does not regard this part of his nature fails to train, or to touch, the whole man. We hear much said now-a-days about sending the whole child to school, — body and heart, as well as the head. And, if a religious capacity is a part of his nature also, why should that be left at home, or relegated entirely to the family or the church?

Furthermore, all people, including even those most bitter against what they call religion demand that *morality* be taught in our schools. But, if we are wholly to ignore the three ideas noted above, we see no substantial basis on which to build a morality worthy of the name. We are confident that a morality founded on utility alone, or as in Bain's system upon the opinions of society solely, will break down when the stress comes.

Besides all this, we believe that every child has an intuitive sense of such a distinction as that of right and wrong, accompanied by a feeling in his inmost nature, that he should do the right

and leave the wrong. This feeling is conscience. The germs of this intuition and of this feeling are in every child who is sound and sane ; but we see no way in which they can be duly developed, if we ignore all considerations growing out of the universal ideas that we have named.

From what has been said, it will clearly appear that we hold that religion should be taught in the public schools. The next question is, How shall it be taught? Negatively, we say that we do not wish it taught because the law of the state commands it. We believe the laws of our American states are wise in allowing each community to settle such questions as this for themselves. We are aware, of course, that some communities by their local enactments may forbid the teaching of any religion,—even of such as we have defined. We should think such a prohibition harmful, as forbidding that which ought to be done ; but, great as we think the harm would be to that community, we think it would be less than would follow a perfunctory teaching of religion, in obedience to a state law. We think the results of the teaching of religion in the schools of Germany will justify this opinion, notwithstanding the recent remarkable utterances of Mr. Matthew Arnold.

Of course, the religion that we have defined is not Christianity, although Christianity includes it ; and, when the opinion of the majority of a local community will allow it, we think it is better to teach Christianity than to teach merely what has been defined. We mean by Christianity the doctrine that Jesus Christ is the Savior, the Teacher, and the great Example, for men.

Now, if it be asked, by what specific means shall Religion be taught, we reply that, in every community where public opinion will favor, it should be taught in the literature used in the schools, in the songs that are sung, by the use of the Bible, by prayer, and in reasonable degrees and ways by direct precept.

But, further than this, in every community, religion should be taught by the life and actions of the teacher ; he should be the embodiment of religion ; it should be incarnated in him. In fact, unless this is so, nothing else, nor all other things, will do much to teach religion effectively. And the teacher, even if he

be forbidden to say a word upon the subject, should train his pupils into such habits of action as would grow out of true religious faith.

Now, if it be claimed that, in some communities, the majority are agnostics or atheists and that they will not allow even the least of what we have advocated, our reply is that it is best, according to our wise system of local autonomy, to let them have their own way, in their own community; but it is not best to listen to them for a moment when they demand that other communities shall be compelled by state enactment to adopt their evil ways.

EDWIN C. HEWETT,

Pres. Illinois State Normal School.

9

Should Religion be Taught in the Public Schools? To this question it is clear that no categorical answer can be given. It is a question involving interpretation and conditions. The answer would seem to depend upon the answers to certain other questions: What is the fundamental purpose of the public school? What is meant by the term "religion"? Who is to teach the "religion" meant? With what purpose is it to be taught? How and to what extent is it to be taught?

1. The public school is an institution and an experiment of the state. Money is not put into it as a matter of charity, but as a matter of economy and of self-preservation. It is cheaper to build schools and to furnish them with teachers and apparatus than to build jails and penitentiaries and to furnish these with keepers, guards and machinery. It is also safer. A government of the people must exist, can only continue to exist, through the intelligence, the wisdom, the industry, the morality, the lofty patriotism, of the people. A Republic rests upon free institutions; free institutions can only exist among free men; a man can not be free who is illiterate, who is the dupe of another, who is the slave of his own evil passions, who has no fixed and noble life-purpose. The fundamental purpose of the school is to emancipate the child from the slavery of ignorance, blind and hurtful desire, rash impulse, apparently aimless activity, to the freedom of cultured, self-mastered, pure and upright citizenship. The

school, then, is to develop the highest type of public and private character that can be realized with its opportunities and its environment.

2. The term "religion" may be variously interpreted. We take it that it means here the Christian religion in that sense which excludes doctrinal theology. In a general sense, we understand it to include: (a) Belief in the truth of the whole Bible as the revelation of the character of God and of His will toward man. (b) Cheerful performance of the Great Duties,—*reverence toward God*, through love, adoration, thanksgiving and trust;—*love of fellow*, through "visiting the fatherless and the widow in their affliction," feeding the hungry, visiting the sick, caring for the unfortunate, the prisoner, the outcast;—*love of self*, through elevating self by the beautiful and ennobling traits—purity, loving kindness of heart, gentleness, patience, forbearance, moderation, etc. (c) "Rendering unto Cæsar the things that are Cæsars," *i. e.*, discharging faithfully the various duties that arise out of one's relationship to society and to government.

3. Religion in this sense and to this extent should be taught by the public school teacher as a part of his great work, but not by any minister or priest of any denomination, as such. The latter may prevent the accomplishment of the direct purpose of such religious instruction,—the implanting in the child-mind only of those great fundamental truths which hedge about and direct the highest manifestation of human life and point it towards its noblest consummation.

4. Such religious instruction, it is believed, is best imparted by wise selections from the Bible, read at the opening exercises of school, but without comment except in the line indicated; by tact in the seizure and use of opportune occasions for impressing the great truths indicated when the child-mind is in a receptive mood; and by the silent, unconscious, persuasive influence of upright and lovable life in the teacher.

To such instruction in religion there would seem to be but three classes of objectors: the atheist and the infidel, who want none of it; the Jews, who object to only a part of it; the Catholics, who want more than this. Briefly, we would reply to the

first: You have no right to object to that which you can but admit has brought incalculable good to the human race, so long as you offer nothing whatever in its place. Negation and theory will never be accepted by thoughtful minds as satisfactory substitutes for positive good.

To the second we would say: The large majority of your people have shown their wisdom and their philanthropy in accepting the teaching of the eternal truths common to us both, though mingled with some things you deem erroneous, and which you can counteract, rather than shut out from the great mass of people the knowledge of God and of a life that leads to immortal happiness.

To the third it might be answered: Your plan can only produce wrangling and confusion and divert attention to the less truths and from the greater ones. The whole spirit of modern civilization is toward freedom of both soul and body from external domination.

But to come directly to the question, we should say that religion should be taught in the schools:

1. Because God is the only fixed point in the universe. Toward His perfection and toward life with Him all that is greatest and best in the progress of the human race has tended. Blot Him out of civilization, and humanity is absolutely adrift upon a shoreless and harborless ocean, without compass in hand or star overhead.

2. Because the glory, the majesty, the beauty, the ineffable peacefulness of the type of life set forth as the Scriptural ideal alone satisfies fully that aspiration for and climbing towards a superior being which lies at the basis of man's upward progress. The loftiest character in the world to-day confessedly rests upon Christian manhood and womanhood.

3. Because, for those who "love God with mind and heart and soul, and who love their neighbor as themselves," no jails or penitentiaries need ever be built.

4. Because, in order to stability of character in every relationship of life, the view must be broader than the immediate horizon, faith must be established in the ultimate triumph of

justice and right, the eye must be able to look beyond the besetting temptation and the imminent danger. Thus the judge is sustained upon the bench, the officer in the execution of his duty, the law-maker in enactments designed to secure protection to life, liberty and property.

5. Because intellectual development is dangerous unless sanctified by goodness of heart and righteousness of determination.

6. Because the safety of the state, the permanence of the state, rest in the greatness of the individuals who compose it. The greatness of the individuals is determined by the greatness of the principles by which their lives are guided. The grandest scheme of human living is that of the Bible.

7. Without morality in its subjects, no free government can live. That morality which rests upon human wisdom and right intention alone is necessarily fallible, subject to error, and in danger of antagonizing its own aims. Infallible laws can only come from a Divine lawgiver.

E. E. SMITH.



RELIGION AND THE PUBLIC SCHOOL.

In its essential nature religion is a purely subjective experience of human spirit which arises in and from the contemplation of a being or energy superior to the reflecting spirit. The modern consciousness of the world regards this superior energy not only as the ground or cause of all things, but as having its being in the form of absolute Personality. The conception of a self-conscious, independent being as the cause and explanation of the universe is the ultimate basis of all states of mind known to the religious consciousness. But the conception is made more particular and concrete by the thought of God as the *father* of men. He thus becomes an object of love, reverence, worship, obedience. The double thought of God as the infinite Father, and, consequently, of men as a divine brotherhood, is the root idea in the system of religious doctrine which seems proper subject of instruction in the public schools. What the numerous outgrowths and branches of this are no effort will be made to set forth. The elements of the religious consciousness of the individual are

religious thought, i. e., intelligence directed to religious subject-matter, religious emotion, and volition in harmony with the first two.

Trusting to the general spirit of what may be said to denote more specifically the nature and aims of religious culture in the school, the subject may receive brief treatment under two heads, namely, (1) the grounds on which it may be asserted that the public schools should give religious training; (2) the means that may be employed to promote the ends of religious instruction and training.

I. The reasons for requiring the public school to train the religious nature of the child are to be sought in a true definition of the school itself, and such definition must in turn be based on a consideration of the being with whom the school deals.

Of school education there are two phases, the special and the general. The training of the special or technical school is designed to fit the student for a particular vocation. It either presupposes a general education or it ignores it, and endeavors to prepare the student for intelligent activity in some profession, trade or business. Examples of this class are schools of medicine, law, pharmacy and the like, in which the subjects of study and instruction and all the work of the school are determined by the limited professional end in view.

The common public school belongs to the second class named. It is a school for general education. In its general aspects education seeks to confer a liberal culture; not to prepare the student for a special calling in life, but for life itself. General education trains the whole nature, unfolds the whole man, promotes an all-sided development. It proposes to discipline and settle into fixed and normal habit of activity every natural power. The public school is to introduce the child to the world of knowledge, train all his faculties of acquisition and retention, ground him in a correct theory of life, and by leading him to establish correct habits of thought and action, start him in the line of achieving all that is truest, highest and best in his nature. The school is to make the individual in fact and reality all that by his nature he is capable of becoming.

The school is to produce the man, not the physician, the law-

yer or the artisan—to promote the growth and unfolding of the entire nature. Therefore, the necessity for the religious training must be seen to arise in the essential nature and inherent needs of the child.

The religious consciousness or capacity, it is maintained, is inherent in the original and necessary constitution of human spirit. The faculty is a universal attribute of man. Religious conceptions, practices and ceremonies are held and performed by every race and tribe on the earth. The capacity to know the Divine being with a more or less adequate appreciation of his nature and the relation of the finite world to him, to have the emotional experience which such thoughts and perceptions are fitted to excite, and to will or choose in harmony with such perceptions and emotions—these are the distinct elements of the religious consciousness. No normally developed human being is without this three-fold mental experience, and the school can not ignore these higher capacities of the child's nature. The being whom the public school educates possesses, fundamentally, a religious faculty or nature, he is to live in a world of moral and spiritual forces, he has the destiny of a spiritual being. God has revealed himself in the physical phenomena, forces and laws of the universe, in the moral order shown in the history of the race, in the human consciousness itself, and in the Sacred Scriptures; and man, the spiritual image of the Divine, rises to the recognition of God in these manifestations. The school undertakes the education of a being who is to live and act in a world of moral and spiritual forces and laws. Whether he shall perceive this and be a sympathetic participant in the world of spiritual activity, or array himself against it and defeat the highest ends of individual life will depend in no small degree on the instruction which the school gives.

Moreover, this being is unique in the finite world. The acorn drops from its parent oak, is subjected to certain conditions of moisture, warmth and sunlight; it swells, sprouts, grows into an oak, reproduces its kind and then, as an oak, it disappears from the realm of being. The species only lives; the individual perishes. But man has a higher destiny as an individual than the perpetuation of his species. Endowed with the powers of self-

consciousness and self-activity, he is an independent energy. A being who is at once the thinker and the object of his own thought, and who possesses the power of determining himself completes the round of his being in his own consciousness, and is *immortal*.

The argument may be briefly restated as follows: 1. The school is an organization designed to promote the symmetrical growth and development of the human being—to train his entire nature. 2. The religious endowment in its three fold nature—intellectual, emotional, and volitional—is an essential and fundamental element of human spirit. 3. The school, therefore, must not fail to take account of the religious faculty in determining the scope of its work.

II. The analysis of the religious consciousness already given reveals as its generic elements—(a) religious thought, i. e., thought relating to religious subject-matter; (b) religious emotion—awe, reverence, love, aspiration, etc.; and (c) volition occasioned by and expressing the activity of mind in religious thought and emotion. Thus are indicated the three lines along which the unfolding of the religious nature is to be stimulated. In each of these, both indirectly and by formal, systematic effort, the school may be an efficient agency. In the field of instruction it may do much to create a true idea of the Divine Being and his relations to the universe and to humanity, and the consequent relationships and duties of man to his fellows. Such fundamental conceptions alone furnish the true grounds of a rational theory of individual life. Here the individual gets his controlling life motive and ideal. The most potent factor in the life of the individual is his profoundest conviction as to the *whence* and the *whither* of all things—the origin and the destiny of the world of being. So of the nation or people. Says *Hegel*, "Religion is the sphere in which a nation gives itself the definition of that which it regards as the True. * * * * The conception of God, therefore, constitutes the general basis of a people's character" Religious instruction, formal and incidental, is one of the means to be employed by the school in culturing the religious nature.

Another formal agency which the school may use is music. Present space permits no analysis of this, if indeed it is not im-

possible to explain in cold language of the understanding the refining and exalting influence which appropriate sacred music exerts upon the human mind and character.

The remaining method of influencing the religious susceptibilities is by prayer. Judiciously employed, this is one of the most effective instruments of religious culture in the school. It may consist in the repetition of the Lord's Prayer by the teacher or teacher and school, in the reading or recitation of the many beautiful and expressive prayers to be found in the Psalms and other portions of the Sacred Scripture, or original prayer by the teacher. Objections to the last frequently urged are not without weight; but it is probably true that the simple, sincere utterances of a prayerful spirit in a school-room are the most powerful influence which the school exerts on its members. Prayer has been rightly termed the highest exercise of human spirit. It is one of the living energies of the spiritual world. The wing of aspiration, it is potent to transform the individual life.

"More things are wrought by prayer
Than the world dreams of."

That it is incumbent on every teacher to employ every method of religious training named is not meant; only that these are some of the means which the school may use in seeking to promote the development of the religious nature of the child.

W. W. PARSONS,
Pres. Ind. State Normal School.

9

CINCINNATI, O., Nov. 30, 1886.

MR. BELL:—In determining the place of religion in the public school, it should be kept in mind that the central and most important duty of the school is effective moral training, and hence that *whatever is an essential means to such training* should have a place in school instruction and discipline.

Both reason and experience show that the religious motives transcend all others in their influence on the will, and hence on character. The exclusion of all such motives from the moral training of the young will not stand the test of life. It follows that the use of religious sanctions and motives is essential to

vital and effectual moral training; and so the only debatable question relates to the *extent* and *manner* in which such sanctions and motives should be used in the public schools, and this is largely a question of *conditions*.

In considering this question a clear distinction must be made between technical religious instruction and the use of religious sanctions and influence, and also between the latter and formal religious worship. There may be an effective use of religious motives in school training without the formal teaching of the catechism or the Bible, and also without formal religious worship—though the latter may be the most impressive form of religious influence. Bible instruction and formal worship may be rendered inexpedient by the diverse religious faith and training of the pupils, but no diversity of religious faith requires the exclusion of all reference to God and immortality from any school. No question of conscience thus arising can set aside the imperative necessity of effective moral training in a public school, and thus the supreme purpose of the school sets a limit to the exclusion of needed religious influence.

Besides the attempt to exclude all religious truth and influence from the public school involves the exclusion not only of the Bible but also of the highest and best in literature, music, and art, for these are permeated by religious ideas and sentiments. The removal of all the books containing religious truth from any public library would leave many, if not most, of the shelves empty. Indeed, it is impossible to teach the meaning of the abbreviation *A. D.*, or of the date at the head of this letter, without referring to religious knowledge.

The position that all religious truth and sanctions should be excluded from school training is not only subversive of the central purpose of the public school, but is wholly *impracticable*. It is impossible to draw a line through human knowledge, dividing the religious from the non religious, and then put school training entirely on one side of this line.

Most truly yours,

E. E. WHITE,

Supt. of the Cincinnati Schools.

(2) *Should Religion be taught in the Public Schools, and Why?* If by religion you mean "the desire to raise into clear knowledge that primarily the spiritual self of man is one with God, to be in the unity with God thereby established, and to continue to live in this unity with God in every condition and relation of life"—I shall without hesitation answer in the affirmative, inasmuch as this is needed to give meaning, value, and permanence to the work of the school.

If, on the other hand, religion is to you a quasi-philosophic system of definitions or a man-made creed by which you hope to raise yourself above your fellow-beings and to escape the just consequences of evil-doing; if it means to you rebellion against God-given reason, the subversion of the child-like faith in truth and justice that fills every God-born soul, the effacement of all vestiges of Christly love to mankind in your heart,—a love that measures its intensity by the wretchedness of the erring or needy brother or sister; if it means to you some particular kind of theology or some particular form of fanciful, morbid, or selfish interpretation of the word of God,—I shall with equal promptness answer in the negative: for the teaching of these things turns the young away from God with whom primarily they are one, estranges them from Christ through whom they are in this unity, and renders them hostile to the Holy Spirit in whom alone they may hope to continue in this unity.

In its deep generous sense, as the thirst for God and righteousness, as the yearning for Christ and love, as consecration to the spirit of truth; as the unfailing fountain of faith and hope, of reverence for things good and holy, and—greatest of all—of heaven-born charity; as the blessed bond between man and Humanity, Nature, God; as the ever progressing, ever present tendency outward and upward,—religion is the rock on which alone education can rest securely, is the soul without which educational influences are dead, is the very life of whatever home and school may do in child-guidance.

Do you say the public school is concerned only with good citizenship? In a commonwealth like ours, based on ethical considerations, a good citizen must first be a good man or wo-

man ; and the goodness of the human being rises and falls with the intensity and scope, the depth and breadth of his religious convictions. Whoever truly feels his essential one-ness with God and man, can not fail to appreciate his responsibility as a member of the commonwealth, and must be proportionately eager to do his duty as such.

That there is need for such religious training perhaps not only in our schools, but possibly also in the family and in the church, must be manifest to every thoughtful observer of public and private affairs. Everywhere we see the same irreligious tendency of isolation, a malevolent greed to make all things *mine*. The monopolist and the trades'-unionist, the grasping merchant and the miserly customer, the cunning manufacturer and the stupid consumer, the partisan in office and the partisan out of office, the princely millionaire and the beggarly tramp, Sing-Sing and Canada, Newport and the County-farm,—all preach alike of the baneful fruits of an irreligious system of isolation which has overtaken us under the guise of personal freedom, denominational tolerance, and the heathen "Look out for Number One" and "Charity begins at home" fallacies.

There are all about us growing currents of philanthropy and Christian charity—individual and associated—laboring to make headway against the evils and to mitigate the suffering resulting from this state of affairs. These currents, indeed, furnish convincing proof of the incorruptible fountain of life that wells up deep in the innermost heart of Humanity; yet, few of these efforts strike the root. Indeed nothing short of a thorough going revolution in popular education, making religious-training the corner-stone of the public school work, can reach the root:—a religious training which, while it steers clear of theology, leads the child to unity with God; a religious training which, while it serves no particular creed, awakens in the soul of every learner conscious faith in the eternal power of righteousness; a religious training which, while it favors no "denomination," opens the heart of every pupil to Christly love and inwardness; a religious training which, while it is free from special ritualistic tendencies, attunes the mind to reverence for things high and low; a reli-

gious training which, while it calls neither for tithes nor alms, fosters in the young a spirit of cheerful self-renunciation without which obedience to the law of God and man becomes a mere matter of expediency.

It is needless to add that this does not contemplate the addition of a "new subject of instruction," but rather and exclusively the spiritualizing of all school-work. However, your question does not concern the "how," and I desist.

W. N. HAILMAN,

Superintendent La Porte Schools.

9

Should Religion be Taught in the Public School? If so, How? Here are two important questions. To the first, we answer, Yes. The public school is the offspring of necessity. Without it, the state can not secure that degree of intelligence and virtue essential to its own peace and perpetuity. It is, therefore, a means for the accomplishment of certain ends. These are two-fold: the first, relates to the pupil; the second, to the state. In behalf of the former, the school must develop mental and moral power; in behalf of the latter, it is to produce, within the limits of its power, good, intelligent, law-abiding citizens.

The welfare and perpetuity of a nation do not depend alone upon the *intelligence* of the people; but upon their intelligence and *virtue*. If not, why the Revolution in France? Philosophy boasted of an approximation to perfection, and never before had the people enjoyed a higher degree of intellectual culture. Why, then, should the goddess of liberty be driven from the throne, as the goddess of *reason* was elevated to it? France had intelligence, but was sadly wanting in virtue.

Both these qualities are vitally important in a Republic like ours. Here the ballot, in the hands of *ignorant* and *bad* men, becomes a dangerous element in society, and unless the state can destroy ignorance and vice, the time will come when they will destroy the state. The greatest problem, therefore, confronting the American people now is, how can the coming generations be so trained and educated, that when they come to exercise the right of suffrage, each may stand in the dignity of a true and

noble manhood, and cast his vote with intelligent and patriotic desire.

Two things are necessary: first, they must *know* their duty; second, they must be *inclined* to do it. How, then, can the *disposition* be developed? The morality which is the mere deduction of human reason, can't impart it. This has been tried, but has always failed, and always will. Civil laws, however wisely framed, can't generate it. Laws are but the expression of public sentiment, and depend for their own efficiency, upon the spirit already existing in the minds of the masses.

In short, no code of morals, except that based upon the principles of the Christian religion—the existence of a personal God who loves virtue and hates vice, the immortality of the soul, the accountability of man, and a practical recognition of that Golden Rule, enunciated by Christ, “Whatsoever ye would that men should do unto you, do ye even so to them,” can develop such a spirit in human nature.

In this system of *Christian* morals, is found a force more potent than the fear of *finer*, or the dread of *imprisonment*—a power that takes hold of the public conscience and secures obedience to law, human and divine, by first reaching down and taking hold of the hidden recesses of the *individual* heart, demanding of it uprightness of intention and purity of purpose.

For these reasons, then, we say the principles of the Christian religion should be taught in the public schools of the state—be, cause essential to the welfare and perpetuity not only of the state—but of the nation itself.

But to the second question, “How shall it be taught?” we answer: first, by the power and influence of *right example*. The influence of example is seen and felt in every department of education; but especially so in the education of the *heart*. It is here that example exerts its fullest force. By the silent influence of his daily life, the teacher is moulding, day by day, the plastic minds and hearts of his pupils into characters of grace and beauty, or he is despoiling that divine image implanted in the innocence of childhood. Consciously or unconsciously, he is leaving the impress of his teaching and example to be seen and felt in all the avenues of the child's future life.

Of all persons, therefore, the teacher of youth should be the freest from moral taint, or even moral suspicion, and his daily life and conduct should be an exemplification of the principles of the Christian religion. In other words, the teacher should *be* what he would have his pupils *become*.

Second, let every branch of study be taught in intimate connection *with God and the Bible*. Open to the pupil the book of nature, and lead him to see, on every page, the lessons of beauty, wisdom, and goodness within them; and thus, through nature, lead him, in adoration and love, up to nature's God. Why not? For what is geography, geology, botany, or astronomy, but a science that is replete with lessons of God's wisdom, and power, and love as in and over all things? Each of these and others, if allowed to speak to the mind and heart of the pupil, will not only inspire him with pure and noble thoughts, but develop in him that receptive spirit which yields a ready and cheerful obedience to the principles and requirements of the Christian religion.

Third, by means of the regular *religious devotions of the school*. In these let the Bible be held up as the infallible standard in all moral and religious teaching; and let it be regularly, but *judiciously* employed in cultivating a spirit of reverence and true devotion.

There is a religious sentiment in the mind of every child; but like other sentiments, it is not self-developing. The fostering hand of education must show this principle how to unfold—this living germ, how to expand from that of a mere sentiment into a profound conviction that shall become a regulating power in the daily life of the pupil. All the devotional exercises of the school—the lesson read, the singing, and the prayer offered—should be conducted with this end in view, and should be characterized by such reverence and fervor as shall tend to awaken and foster this Christian spirit.

J. H. MARTIN,

Superintendent Madison Schools.

7

FRÖBEL's definition of education is "the conscious development of the divine in man and in mankind." Now, it is not possible to develop or evolve that which is not in some sense

enveloped or *involved*. Fröebel's definition, therefore, implies the divine nature in man, which needs but proper conditions in order to grow into a perfected character. The conditions of such a growth are, metaphorically speaking, food and exercise, *i. e.*, ideas, and the activities necessary in their mastery. But the ideas must accord with the nature of the soul, and the exercise follow its laws of action.

The ideas which it would seem are adapted to thus invigorate this partially developed spirit, are, to some extent, the ideas which express the relations of this divine germ in the human spirit to the Universe, and to the great First Cause.

Feelings consequent upon such contemplation, admiration of ideal excellence, of omnipotent power, of all-pervading goodness, and a longing for some part in the great movement of the divine activities, raise in the mind a glorious hope. The mind becomes pervaded by a feeling of love for the Divine Being and for all His creatures. Thus faith,—a confident and cheerful view of our relation to God, hope to participate in His plans, and charity,—an indulgent love for all, are conditions that express development in consciousness of the divine germ in man.

But faith, hope and charity are essentially religious conditions of the spirit, and if brought about at all are to be brought about through religious instruction. They do not necessarily involve theological controversy, or the dogmatic teaching of sectarian beliefs. They are more likely to be induced by association with persons who possess these celestial virtues, and who exhibit them naturally and forcefully in the prosecution of their daily work.

The daily programme of studies involves each day many opportunities for appeal to the religious nature of the pupil. The quiet assumption on the part of the teacher of the essentially religious nature in the pupil, and the teaching of all subjects and the administering of all discipline, in view of such nature and its relation to its Creator, give the conditions most needed for its development. Such assumption is necessary in order to give vitality to such teaching as is usually considered merely moral. Morality is merely an externality, without life or mean-

ing except it be founded on deep-seated religious convictions. The largest hope in this direction is to be found in the employment as teachers of those who are themselves thus developed; so that their influence shall all of it be unconscious instruction in religion and morality. While believing that the indirect influences thus indicated are most to be relied upon, I do not deny that it is possible to give direct religious instruction in the common schools. In Germany direct religious instruction in religious matters is made obligatory, even at the great risk that it will become sectarian. Stories of the oldest times taken from Genesis, adapted to children, are told, as also those of the childhood of Christ. Then come stories of the Patriarchs, the Ten Commandments, and the parables of the New Testament. The whole ends with the doctrine and history of the Lutheran Church. All that is done in the German schools, should, in my judgment, be done, and well done, in ours, except the doctrine and history of a special church. This is a matter of less importance, and, by its very nature, must be left to the Sunday-school or the Church school.

LEWIS H. JONES,

Superintendent Indianapolis Schools.



THE ultimate aim of all education is morality. All institutions are ethical, and exist for the same purpose, viz., to enable man to realize his infinite possibilities, to cancel what is negative and finite in him—what we call the “bad,” the “ugly,” the “irrational,”—by developing the positive; the good, the beautiful, the true.

It is a mistake to suppose that, in our complex civilization, all institutions can be united in one. We can not go back to that time in the history of our English race, when every freeman was “his own judge, his own legislator, and his own house-priest.” Neither can we unite in one complex institution, though it be the highest, all the functions of State, society, school, and family.

This differentiation exists in institutions as in nature, that we may finally arrive at a higher unity. Church and State are none the less valid because not united under one head, nor does the State

fail to realize its ends because acting through legislative, executive, and judicial departments. As these institutions all exist for the same purpose, they should all work together for the same end, each in harmony with the highest, and with all.

Carlyle has well said that a man's religion is the chief fact in regard to him. "The thing a man does practically lay to heart concerning his vital relations to this mysterious universe, and his duty and destiny there, creatively determines all the rest."

The Church should teach those universal truths which "creatively determine all the rest." All institutions should strive towards a practical realization of them.

Now, however churches and creeds may differ, there are certain fundamental truths, which are in some way reflected, in all churches and in all secular institutions. Some of these truths are: 1. That man is a duality and a unity—he is body and spirit, finite and infinite, united in one individual. 2. The lower, or finite nature, should come into harmony with, and be governed by the higher.

Religion has been defined as "the effort on the part of the finite to come into harmony with the infinite." It implies reunion with God, and has been termed by Fröbel God-Union. What we term morality, is included in this view of religion. The feeling of duty or obligation, belongs only to a being who has a higher law within him, and above him, and is capable of becoming conscious of, and obeying it. All nature is the expression of mind; but man, alone, knows the laws of his own being, perceives what he ought to do, and thus obeys his nature freely, consciously. Only by the education of all institutions combined, can man be brought to know and live these divine laws, and thus to become truly conscious. In the school, all that tends to the harmonious development of the powers of the soul, tends to the fulfillment of this aim.

The little child is harmoniously related to nature, to God, and to man—an unconscious unity. He should not be awakened to a knowledge of his dual nature, through failure, pain, and suffering, but should be led to a knowledge of himself through a gradual, harmonious unfolding of all his powers. Goethe, in

his "Pedagogical Province," would have him begin to awaken to his three-fold relation through song and gesture. "We teach a three-fold reverence, which, when combined to form a whole, only then attains to its highest power—the reverence for that which is above us, God; for that which is around us, man; for that which is below us, nature. In this he has indicated the course of training for all schools for all time, and a course which will require a full development of all the powers of the child's nature.

The mistake in training to morality has been in supposing that there were certain natural powers of the soul, which should, if possible, be eliminated. The true doctrine, as I believe, is, that all powers should be trained into harmony with man's true nature and destiny, which is, to realize the divine in him. If we would thus educate, we must keep the child related to "*the whole*" of which Goethe speaks.

In the child the higher powers, though present and active, are only beginning to unfold. The soul, acting through the senses, is trying to free itself by self-activity, and in no other way can it become free. It will, in due time, if the proper conditions are furnished, send out from these roots of the senses the stems of understanding and the flowers of reason. We must use the mind first upon the things that are seen, if we would finally know the "unseen and eternal." The law of growth in nature and in spirit is, that the higher force or being uses the lower: the lower is changed to the higher, or, rather, the later development presupposes the earlier. The child sees God now in nature as Creator, and in man as Person. He has no theological or philosophical view of the personality of God. He learns to love "his brother whom he hath seen," and thus learns to know "God, whom he hath not seen." His soul is only darkened and confused by an attempt to teach religion in the new form of dogma. Though much may be taught by symbols, and more, perhaps, through music, harmonious development requires not only the proper environment, but assumption and production. "Let us try to have the child embody all his perceptions in actions, even from the beginning," says Froebel. The little child

should be led unconsciously to act in accordance with the higher law before this law is presented in the form of precept or doctrine. The ideal school is the little community in which he acts freely in accordance with moral law, according to his nature and development; for if the law of the school is irrational, disregarding the laws of the child's nature, it is immoral in its tendency. It makes a wonderful difference in the life of the child, whether, on entering school unable to read, write, or draw, he is given a few little sticks to arrange in imitation of some simple form, or whether he is told to sit still and do nothing. In one case he is following the law of his being—the law of mental and physical activity. He is willing freely to do the right; his tendency is toward obedience to moral law. In the other case he becomes indolent, losing the use of his powers; or, necessity of his nature being stronger than the word of the teacher, he openly disobeys; or, wishing to satisfy both nature and the law, he deceives, and thus he becomes confused at the start as to what is right and what is wrong.

Richter, commenting upon our inconsistency in the government of children, says: "The father in the first hour reads to the child '*pure morality*;' in the second, '*mixed morality*;' in the fifth, 'the chief matter is that you should succeed in the world, and become something in the State;' in the sixth, 'not the temporal but the eternal, determines the worth of a man;' in the seventh, 'therefore, rather suffer justice and be kind;' in the eighth, 'but defend yourself bravely if anyone attack you;' in the ninth, 'do not make a noise, dear child;' in the tenth, 'a boy must not sit so quiet.' So, by the hourly change of his principles, the father conceals their untenableness and one-sidedness."

As a necessary part of the training to morality, the school must bring to the child ideals of conduct not only in the person of the teacher, but high examples should be brought near to him in the lives of others. He desires to realize his ideals in conduct, just as he desires to see his perceptions in material form. The story, the poem, the song, the picture, are the art-forms through which these ideals can best be presented to little children. In the story he sees other spirits like his own, unfolding

in an ideal manner. The power of the faculty of imagination is portrayed in a single sentence by George Eliot: "We are saved by making the future present to ourselves." The Bible should not be excluded, but should never be interpreted in a sectarian spirit. Only that which has universal application should be presented; and we should remember that "only what the child experiences, within itself, is full of life."

NEBRASKA CROPSEY,
Superintendent Primary Schools, Indianapolis.

9

RELIGION AND THE SCHOOL.

Religion should be taught in all our schools, from the lowest to the highest, because it is the most important part of man's nature. Without it, the best physical education leaves him little better than a well-fed animal—the best mental training, little better than Archangel received. Important as both these are, they are powerful for good or evil in proportion as they are, or are not, permeated and directed by the highest spiritual or religious life. So much for the "Why?"

What religion should be taught? Not that which calls itself "Catholic," or "Christian," or which by any other narrow and sectarian designation would arrogate to itself a peculiar and exclusive right to the divine favor. Not that which attaches extreme importance to forms and ceremonies, and consists largely in ceremonies and forms almost without end, and without utility. But, positively, that which is "first pure, then peaceable, gentle and easy to be entreated, full of mercy and good fruits, without partiality and without hypocrisy"—that which understands and obeys the divine injunction, "He hath showed thee, O man, what is good; and what doth the Lord require of thee but to do justly, and to love mercy, and to walk humbly with thy God"—that which, on the highest authority expresses the substance of the Law and the Prophets, Christ and the Apostles, viz., "Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind; * * * and thou shalt love thy neighbor as thyself"—and which is so beautifully and fully illustrated in the life and spirit of the great Teacher himself.

How should religion be taught? Not by dismal books, or long prayers, or constant harping upon faults; not in that scrupulosity which would tithe mint, anise, cumin, and leave the weightier matters of the law without attention; but in honest sympathy with all that is good in the learner; in constant, true endeavor to develop the bodily, the mental, and the spiritual nature in harmonious, just proportions; in healthy discipline; exemplifying the reality and power of divine grace in the heart and life of the Teacher; in practically recognizing Deity as everywhere revealed—in His works, His providence, by His spirit, and more especially in His word. Leaving disputed matters, about which honest and intelligent men differ, to the clearer light of the hereafter, there is a vast body of the most important truth about which right-thinking men are substantially agreed. The Bible should be recognized not simply as a book of superior ethical value, but as the Word of God, deferring constantly and implicitly to the teaching of our Lord and Savior, Jesus Christ—believing His word, obeying His commands, and exemplifying His Spirit as the ideal of our perfected manhood.

Thus Religion and Education—twin daughters of heaven—should go hand in hand. Religion, uneducated, tends to superstition and bigotry. Education, without religion, tends to infidelity and atheism. The true conception of both is to regard each as the complement of the other. Those who do not so regard them are wanting in the first and highest qualification for the sacred work of education.

ALEXANDER MARTIN,
Pres. De Pauw University.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

WHY SHOULD RELIGION BE TAUGHT IN THE PUBLIC SCHOOLS?

THE most important reason is that it can not be helped. All kinds of schools necessarily and unavoidably give religious training of some kind. Ask, of a warm-blooded animal, whether it will breathe, if let loose in the free air of heaven!

With equal propriety, ask whether children in any school will constantly imbibe notions of the Divine Being and of their relations to Him and constantly be in some emotional attitude in consequence of these ideas!

Religion consists of two elements: First, a certain series of ideas relative to the world, God, immortality and one's self, which we will call the piety of the intellect; second, a certain attitude of the emotions, usually called reverence toward God and kindness toward one's fellows, a surrender of the human and finite will to the absolute will (denominated worship), which we will denominate the piety of the emotions and of the will. The intellectual part can be taught; the other can not.

All men, women and children, above the years of accountability, frame for themselves some theory of the universe, of God, and of their souls, by which they conceive and explain these things. As all such intellectual action finds expression in an emotional condition it follows that the religious element is as universal as the human mind. Men's ideas may be sadly warped and perverted; yet every one has some sort of religion (using the term to cover both religion and irreligion). This is by no means a mere shadow among his ideas, but a living force to shape his life and character. The pantheistic atheism of a Voltaire or an Ingersoll is his religion, as fully as the theistic piety of a Wilberforce or a Wesley, is his religion. The greatest villain who haunts the slums of vice has his theory of God and of himself, and has his emotional coördinate to these ideas, which rules his life. Because he believes God to be a being whom, in some way, he can cheat and whose punishment he can escape, he makes no surrender of his will to the absolute will, but raises his puny arm against the divine order of the universe, until at last his deeds return on his head and crush him.

If, then, the religious faculty is as well marked as other great faculties of the human soul, and if we can not by any possibility escape giving it incidental training by our school work, there are two possible questions: 1. Is our school work of all kinds so ordered that it gives the right kind of incidental training? 2. Shall we attempt anything more than incidental religious training?

Before answering either or both of these questions, let us see whether we are all using terms with the same meaning. What is meant by incidental religious training?

The influences of the school arise out of its instruction, its government, its attitude of mind or general atmosphere, and the personal intercourse of its pupils and teacher. The background of all these things, in every possible school, is either religious or irreligious. If there is an honest, earnest, reverential man or woman at its head, who has force enough to shape it, it is essentially religious, no matter whether there is a formal prayer and other worship every day or not. On the other hand, if the head is a weak, selfish, narrow-minded egotist, however many the moral lectures and other formal exercises, the school is essentially irreligious in its influence and atmosphere. There is, it is true, an element in the pupils' intercourse the teacher and school can not act directly upon, but even this is not entirely beyond their power.

Instruction or teaching furnishes opportunity for a very important element of incidental religious training. All teaching involves more or less explanation, and the moment we begin to *explain* with fullness a fact in history, science, geography, or other subject, we come upon the conception of God and of our relation to him (as, e. g., History, Geography), or on some thread that runs immediately into these things. Causes and reasons of all kinds lead up to the great First Cause and First Reason. All forms of science are on the border-land of the Divine. Such teaching is unavoidably active. We of necessity give it at every turn. And since this is true, our duty is plain; it must be correctly and efficiently done.

Incidental religious instruction is, then, of two varieties:

1. That which grows out of the attitude, tone and general atmosphere of the instruction, government and intercourse of the school.
2. That which grows out of the background of explanation in all instruction. To discuss the qualities of the school that give right incidental religious instruction is beyond the scope of this article. It is sufficient to say that they are by no means peculiar to this kind of instruction, but are common to it, moral training and

intellectual training of all kinds. All these kinds of training exist in the nature of the school and can not be imported into it.

The second question, "Shall we attempt anything more than incidental religious training?" is more difficult of answer. Here again we must seek light in the nature of the school and its purpose.

The school is the great formal instrumentality which gives its members the literary, logical and ethical culture accumulated and transmitted from generation to generation. We say that the purpose of the public school is to make good citizens. This is correct. The good citizen is the highest product of civilized life. But what is a good citizen? An automatic money-getting and voting machine? Manifestly not. He must be, first of all, a good person. He must be a good member of the family, of the church (meaning all who reverence God), of the social circle, of the business world, and of the political organization we call the State. In so far as any citizen is wanting in any of these regards, he is deficient in some element of good citizenship.

Good citizenship at once implies a cultivated mind—one cultivated in its whole round of faculties. The intellect must have had training in school and out of school, and be possessed of a large share of the accumulated knowledge of the race. The emotions must be rationalized and made subject to the intellect and will. The individual will is to be brought into subordination to the expressed and formulated will of bodies of men acting in an institutional capacity, and to the absolute will as revealed by reason and the word of God.

The public school is the public instrumentality for training children to good citizenship. This is its end in every civilized country. As such it aims at training all the faculties. The religious faculty is as much a part of the mind's nature as the judgment or the will. Its culture is as necessary a part of training as the culture of these faculties.

If the foregoing reasoning is correct, we have established the claims of active training for the religious nature. But we have not determined how far this should be carried.

Alliance to a denominational creed is, no doubt, under present development, a necessary condition of religious life. But

the public schools have nothing to do with training in creeds, since by any such attempt they excite one denomination to conflict with another, the final result of which must be the destruction of the schools, if not of the State itself. Active religious training by the public schools must, therefore, limit itself to that field common to all denominations. This is entirely feasible and is demonstrated by experience to excite no serious opposition from any church. The limits of the school's duties in active religious training are co-extensive with this area of common religion and worship.

S. S. PARR.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

HOW CAN THE RELIGIOUS FACULTY BE CULTIVATED IN THE CLASS-ROOM?

RELIGION (Webster states) may mean to "bind back" or "bind fast," and the Divine Being is the one to whom something is to be bound fast. Think of the pure mind and heart of the child who is "bound back" to one who gave it life! Is not that a beautiful thought?

Some of the cords which may bind the mind of the child are those of faith, love, truth, honesty. The father, mother, and other inmates of the home weave these cords, thread by thread. Thus faith in them creates faith in others. The child smiles in the face of a stranger, expecting the sympathy and kindness it meets at home. On entering school he looks to the teacher for the qualities which he has found in his mother or his elders. He has faith in her, he expects her to be invariably kind, truthful, honest, and in so far as she fulfills his belief she is leading him to the conception of God.

What can the teacher do to enlarge his faith, to insure his honesty, in word, thought and deed? She must seek to cultivate the religious faculty as she would the memory, the imagination. This can be done in several ways:—

1. By being strictly truthful, honest, consistent, and uniformly kind in the school-room.
2. By leading the pupils to take pleasure in realizing these qualities in themselves.
3. By leading the pupils to seek for these qualities in other people. (a) In their associates. (b) In The characters as described in the various stories read. (c) In the character of Christ as set forth in the Bible.

Children can be made familiar with the life of Christ and his teachings by selecting and reading passages relating certain acts performed or truths taught. The childhood of Christ is always interesting to children. There are a few pictures which will aid in awakening this interest. Some of these are: Raphæl's *Madonnas*; The Boy Jesus in the Temple, by Heinrich Hofmann of Dresden; some of the *Nativities*, by the best artists; Christ Blessing Little Children. Harper's Monthly for December, 1885, contains several fine pictures in the article *The Nativity in Art*.

The child can understand his dependence upon his father for food, shelter, clothing; the necessity for obedience to him; his duties toward him in many respects. He can also understand these facts concerning his Heavenly Father.

MRS. F. S. BURT.

PICTORIAL ILLUSTRATION.

It is only a comparatively small number of objects that can, in school work, be brought under the immediate observation of the pupil. This is the ground for mediated perception, i. e., the perception of a thing by means of its representation. To insure that the use of pictures as illustrations may not become merely a means of entertainment, careful questioning and explanation should be employed in connection with the illustrations. It is only when the thought in the picture is carefully worked out and made evident that the picture is useful as an illustration. It has been said that "our age inclines at present to the superstition that man is able, by means of simple sense-perception, to attain a knowledge of the essence of things, and thereby dispense with the trouble of thinking. Illustrations are the order of the day,

and, in the place of enjoyable descriptions, inferior pictures are found. But it is in vain to try to get behind things, or to comprehend them, except by thinking."

The picture as a means of illustration has some advantages and some disadvantages. It magnifies some elements and reduces others, and is in that sense not true to nature. In it some elements are omitted, but these are usually the non-essential elements. The picture is the attempt to put in visible form the concept, so the picture is a closer approach to the type than would be an individual. The idea as obtained through the picture is reached more easily than by means of a real specimen, but the knowledge is not so practical. The real object has in it many marks that are special and accidental, and therefore requires much thought and comparison in order to determine the type. In this lies its advantage. The picture leads the pupil to the type much more easily. In this is found its disadvantage.

Since the picture is to be used in connection with description and questioning, the question of the order in their use arises. If the aim is merely to obtain the idea in the easiest and quickest way, the picture should be used first. If the aim is to awaken interest and confer mental strength, the work with the picture should follow the description, since this will require the greater mental activity and mental strength results from the child's self-activity.

THE HABIT OF OBSERVATION.

THE fundamental step in education is to implant a habit—the habit of accurate, systematic observation. The pupil should be trained to look for certain constantly recurring attributes. In this way he makes his observation systematic. Ordinary observation should gradually be changed into systematic observation. The difference between the two is this—the former is unsystematic and fragmentary and results in individual ideas, while the latter is systematic, complete, resulting in general ideas, and systematic action. The teacher should gradually raise the ordinary perception of the child into perception that is interpenetrated by thought. One without the power of observation is not only without the power of thinking, but he is also deprived of a great

deal of his legitimate enjoyment. He is "as one walking through a beautiful region in a fog. The horizon is close about him."

A study of the mind of the average child will make it evident that he does not possess the habit of systematic observation. It will disclose more than this. It will show that he does not have the habit of unsystematic observation. A study of the average pupil will awaken the thought that he does not desire to observe, and that his school answers are not based upon observation, even in cases where they might be.

The child does, at the very beginning of his school course, possess the desire for and the habit of fragmentary observation. But very early in his progress, through memory and rote work, both the desire and the power are lessened. As Spencer says,—*"Having by our method induced helplessness, we make the helplessness a reason for our method,"* and continue the cramming and telling process on the ground that the child can not observe and decide for himself.

In Smiles' Self-Help it is truthfully said, *"It is the close observation of little things which is the secret of success in business, in art, in science, and in every pursuit of life.* Human knowledge is but an accumulation of small facts, made by successive generations of men, the little bits of knowledge and experience carefully treasured up by them growing at length into a mighty pyramid. Though many of these facts and observations seemed to have, in the first instance, but slight significance, they are all found to have their eventual uses, and to fit into their proper places."

PRINCIPLES OF THE KINDERGARTEN.

THE fundamental idea of the kindergarten is unity. Therefore we present each object alone because the idea of unity should always precede that of variety, and unity should be conceived as the basis from which variety is evolved, and by presenting it alone the attention of the children will be concentrated upon that one object. By showing the object at rest before presenting it in motion the mind of the child is not confused by two rapidly succeeding impressions. We have the child view the

objects from many standpoints that it may accustom him to judge carefully and choose accordingly. We emphasize the salient characteristics that the child may learn to distinguish the salient and permanent from accidental and transitory qualities. We repeat the exercises given with gifts with other objects, that the typical significance of the gifts may be brought out.

Objects should be presented in a regular sequence in order to bring out the principle of continuity and to establish the habit of viewing the individual in its connection, and we let this sequence move from the known to the unknown, from the simple to the complex, from the concrete to the abstract, from the definite to the indefinite, from the homogeneous to the heterogeneous, and from the general to the particular and from the particular to the general, because this corresponds to the law of progression which governs the development of mind.

Every object used in the kindergarten must be considered as a key to the outer and an awakener of the inner, or must interpret the outer world and arouse all of the dormant faculties in the child.

We develop the three-fold nature of the child by appealing to his thought by suggesting and explaining to his feelings by music and the associating of each object with his affections and to his will by requiring him to handle, divide, reconstruct, transform, combine and create.

ESTELLE HUSTED.

THE SCHOOL ROOM.

[This Department is conducted by GEO. F. BASS, Supervising Prin. Indianapolis schools.]

WATCHING PUPILS.

I N many graded schools teachers are required to stand in halls, on stairs and on the school grounds during mornings, noon-intermissions and recesses, to watch the pupils as they pass into the building. Aside from the loss of valuable time used in this police duty, the practice is open to serious objections. It tends to suggest the Spartan idea of honesty; all right to steal, but wrong to be caught at it. If pupils are watched at

every turn they are inclined to take advantage when they are not watched. It is the business of the school to so train the pupil that he will govern himself. This habitual watching will not so train him. It may be necessary to do this police duty for awhile, but it ought to result in something better. It ought to be a means of reformation. If children are forced to be orderly it ought to fix in them the habit of orderly conduct, so that eventually it would become so strong that they would behave properly whether watched or not.

If they are *always* watched they are never thrown upon their own responsibility, and of course their power to resist temptation is weak. They are like a tree that has grown in the middle of a great forest. When the forest is cut away and it is left on account of its beauty, the first storm blows it down because it had been protected by the others and had not been strengthened by resisting storm after storm. Our pupils should be like a tree that has grown in an open field where from the first it was subjected to storms and was given strength from mother earth to resist them, and by so doing grew strong. Let us watch enough to know what temptations there are to resist, and then let us talk with the pupils about them in such a way as to get them to determine (will) to resist them, then give them an opportunity to test their power. If a pupil cannot succeed help him. This help may be to watch him, or deprive him of the privilege, or it may be corporal punishment—but whatever it is, it should be of such a character as to make the pupil determine to act properly, and then he must have an opportunity to carry out his determination.

Reform must come from within. A whipping can not reform a boy. It possibly may call his attention to his sins and so stimulate his will power that he will reform. Too much is done for the pupils of many graded schools in one direction and not enough in another. Too many rules or regulations are to be obeyed just because they are regulations. While there is a moral training in this, there is a higher moral training growing out of their being made to see the justice of these requirements. They obey them because it is right. They grow to need no *regulation*. They act upon principle.

A SOFT ANSWER.

"A soft answer turneth away wrath; but grievous words stir up anger."

How much wrath might be turned away, if teachers would act on the suggestion of the above proverb! True, sometimes pupils give grievous words, and then the teacher verifies the latter part of the proverb by allowing his anger to be stirred up. This is wrong. The teacher is supposed to have more self-control than the pupil. If a pupil tells a teacher he "won't do it," the teacher has no right to tell the pupil that if he doesn't he will be "knocked through that wall with a three-legged stool" that happens to be handy. This would stir up anger. The teacher should give a *soft answer*. This does not mean that he must say "please do," or "I shall feel *so* sorry if you don't," or any other *wishy-washy* thing. He may say something that will turn this pupil's thoughts inward—make him reflect upon his own thoughts and action. The teacher might say: "You are hasty in your decision; I will give you time to think about it;" or, "I think you ought to;" or, "Is the requirement unreasonable?" In nine times out of ten the pupil will do willingly the very thing he said he would not do, and a *scene* is avoided; and anger is not stirred up; and the teacher has the respect of the entire school.

SQUEAMISHNESS.

There are some teachers who will allow a pupil to deceive them from day to day because they are afraid the pupil will feel that he is not trusted. He has been absent. He brings a written *excuse* saying, "John was sick yesterday, please excuse him," signed by the parent. The writing is that of a school boy or girl. The teacher is certain of this, but will not ask who wrote this and why the parent did not write it, for fear the pupil will think his honesty is doubted. If he is honest, he will tell just how it happened, and think nothing of it. If he is dishonest, he will tell just how it happened, and *will think something* of it. He will first say that his parent wrote it, and afterwards tell that his "big sister" wrote it, and how it all happened, and then *appear* hurt because the teacher does not believe him. Just

here the teacher may show him that according to his own story he has not been truthful, and therefore he is under no obligation to believe him. Lead him to feel that if he wishes to be believed, he must not attempt to deceive; that the only way to regain the confidence is by truthful action; that it takes much longer to regain the confidence than to lose it. The teacher may offer his assistance by giving him opportunities to show that he can be trusted in the future. But suppose the teacher, through squeamishness, lets a deception go on, the pupil thinks he can gain his points by deception; can absent himself from school and play truant without any danger of being discovered. The teacher is then allowing a bad habit to grow in the pupil. The pupil should learn early that "the way of the transgressor is hard." That wrong action will not pay. It is the business of the teacher to detect crime as well as to reform the criminal. Some parents are so "wrapped up" in their children that they would not believe that one of them would tell a falsehood. Some teachers become so imbued with confidence in their pupils that they will not even investigate an accused one. Investigate and then reform, if possible. If punishment is given, let it be given for the purpose of working a reformation.

SHORT NOTES.

"ROLL OF HONOR."

On some blackboards the above words are placed. Sometimes a few names are written under it. We don't like it. It suggests a roll of dishonor too. We are led to wonder whether all the rest belong to a dishonorable class.

"BAD."

We have occasionally seen this word on the board with a name or two written under it. This, we think, has a bad effect. The publishing the fact that a boy is bad does not have a tendency to reform him; it hardens him.

WORTHLESS.

Superintendent steps into a room, and the teacher says: "These children are the most worthless set I ever saw. They

don't know anything." The children hear this and it does them no good. They say to themselves that they *do* know *something*. they feel that they are not fairly represented. Then, if the superintendent lectures them about their short comings, fuel is added to the fire.

CRITICISM.

Should a superintendent criticise a teacher in the presence of the school? Nearly everybody would say *no*, with emphasis. Yet, some teachers say that there are some superintendents who do so. They should be reformed.

"FREE LECTURES."

Teachers used to give us boys "free lectures" once in a while. There was nothing that we so despised as these "free lectures;" nothing that so stirred up all in us that was mean. I think they are not so common now. Teachers have gone to the other extreme. They say nothing about how people should act. They will read the Bible or a story during the opening exercise, "without note or comment." Why not have a pleasant conversation about the good points of the selection? Why not, in our opening exercises, drop some practical advice in a pleasant way?

TEACHERS' LICENSE.

Ed. School Journal:—I presume there is no other question that concerns the teacher more than that of procuring license to teach school.

Under our present system of school laws, before a person can teach school in any county of the state, he must pass an examination, and procure license in that county. This is manifestly a great injustice to both teacher and superintendent.

The school laws should be amended, so that a teacher's license would permit the holder to teach in any county of this state. In other words, county license should read "State License." Our next Legislature should be petitioned, by every teacher, superintendent and trustee, to so amend our school laws.

Under our present system of conducting examinations, with our excellent corps of county superintendents, and universal State Board questions, with state instead of county license, fully nine-tenths of the trouble and expense could be saved. Superintendents would have more time to devote to school work, and teachers be saved many long and useless journeys and needless expense.

It is time the teacher was relieved of some of the useless and harmful burdens imposed upon them without a relative advance in wages. Let some of the old worn-out fog laws be dropped, and more equitable ones be enacted. A. R. MCCOLLOUGH.

FOWLER, INDIANA.

OFFICIAL DEPARTMENT.

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THE BIBLE IN THE PUBLIC SCHOOLS.—THE LAW.

SEC. 4493 R. S. BIBLE. 'The Bible shall not be excluded from the public schools of the State. (Sec. 167 of the Acts of 1865.)

OPINIONS.

The Bible, without note or comment, is installed in the common schools of Indiana. Its continuance as the moral class book in these nurseries of her future citizens will as surely mark the period of her prosperity and grace the zenith of her glory, as its exclusion would prove the precursor of her decline, the herald of her shame.—*Caleb Mills, Sup't*, (1855).

Neither the examiner nor the trustee should ever inquire into the peculiar religious belief of a teacher, yet an examiner should not license an immoral person, nor one who is a scoffer at the teachings of the Bible and things sacred.—*Miles J. Fletcher, Sup't*, (1862).

Our law, therefore, wisely leaves the whole matter of Bible reading and prayers with the good judgment and conscience of the teachers. To obligate them by contract to read the sacred Scriptures and hold prayers in their schools would be in exceedingly bad taste, if not sacrilegious; to refuse them the right, when they, in good faith and conscience, desire to do so, would be the very worst of tyranny.—*Milton B. Hopkins, Sup't*, (1874).

Under this statute and these opinions, I hold that a trustee or school board can not forbid a teacher's reading a chapter of the Bible at the opening of school, but, may forbid all comments and other devotional exercises. An assistant teacher could not, probably, be required to be present at such Bible reading, conducted by the principal, but, must give the principal all necessary help in moving pupils from room to room, as may be required by such exercises.—*John W. Holcombe, Sup't*, (1886).

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

SEVERAL articles of general interest have been crowded out this month, but they will find a place soon.

WHEN your JOURNAL does not reach you by the 15th of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

THE JOURNAL does not give its usual great variety of matter this month, but this loss will be more than made up by the full and satisfactory discussion of the most important of all school topics—the relation of religion to the teacher and his work.

THE ADVERTISEMENTS in this number of the Journal are well worth reading. One of the best means of keeping posted in regard to new books, new supplies, new *everything* in regard to school work is to read the advertisements. This issue of the Journal contains an unusual number of interesting advertisements.

VOLUME XXXII.



THE JOURNAL, in entering upon its *thirty-second* year, extends the "compliments of the season" to its many friends. It enters the new year with bright prospects and high purposes. It believes that its unusual success in the past has been due to the fact that it has kept abreast the educational thought and has met the demands of the teacher in his everyday school work. It will spare no pains to make Vol. XXXII the best of the series.

The JOURNAL wishes to thank its many friends for their hearty support and encouraging words of approval. It will endeavor to remain worthy of such devotion.

THE BARTHOLDI STATUE.

The Bartholdi Statue, entitled "Liberty Enlightning the World," is the gift of the French people to America as a token of the good will of France to this country. The statue itself is the largest in the world. Its height is 151 feet and it weighs 440,000 pounds, 176,000 pounds of

which are copper and the remainder wrought iron. The width of the eye is twenty-eight inches, the length of the nose is three feet nine inches, and the length of the fore-finger is seven feet eleven inches; and yet these parts are in proportion and do not seem grotesque at the great height at which it is placed. The pedestal and foundation which have been paid for by American subscriptions and an appropriation by Congress, is a work of art and cost \$250,000. The entire height of the statue is 305 feet above the water. Elevators are to be constructed inside by which persons can reach the top. Twelve persons can stand on the torch at one time. It is lighted by electricity.

It takes its name from Auguste Bartholdi, a young French sculptor who designed the statue. It is situated on Bedloe's Island in New York Harbor. The island contains about thirteen acres and has for many years been the site of an old fort. The view from the island, especially from the statue is said to be *grand*.

*SHOULD RELIGION BE TAUGHT IN THE PUBLIC
SCHOOLS? IF SO, HOW?*

Almost the entire body of the Journal this month is taken up with the discussion of the above questions. They were sent by the editor to a number of leading educators with a request for short articles, and the foregoing are the result. No suggestion was made as to the manner of teaching or as to what was expected. Each writer was left entirely free to give his own definition of religion and to make his own application.

The writers were selected as representative educators, without any thought as to church relationship, but since noting the remarkable unanimity of conclusion, in the papers, it is interesting to note that the authors represent the following churches: Methodist, Presbyterian, Baptist, Unitarian, Christian, Congregationalist, and no church. It is certainly very remarkable to note the almost exact agreement of all these papers. Without exception they all favor the teaching of *religion*, and without exception they condemn the teaching of *sectarianism*.

These articles are a demonstration of the fact that the strong sectarian feeling between churches is disappearing, and that opinions about religion are of little importance when compared with religious life. Opinions about God, about Christ, about total depravity, about baptism, about predestination, etc., are the points on which people differ, but it is not at all necessary to discuss these in order to teach truthfulness, honesty, self-control, charity, kindness, forgiveness, reverence.

In *theory* a line can be drawn between morality and religion, but in practical life no such line can be drawn—they are but different phases

of the same thing—life. What most people call “mere morality,” St. James calls “pure and undefiled religion.”

When we get so much religion that we can recognize the fact that every free act is either religious or irreligious in its tendency, we shall see and know that religion enters into all conduct and into all the relations of life, both in school and out of school. No one can object to teaching religion in school unless he in his definition of religion substitutes for the essential, the non-essential—for the thing itself, the theories about it.

The reason why some people call the schools “Godless” is because they persist in mistaking their own theories about religion and the church, for religion itself.

Let us then hear the conclusion of the whole matter: Religion the creed, the form, should not be taught in the public school; but religion the spirit, the noble purpose, the life, should be, must be;—and this being true it can be better taught by example than by precept. *Therefore* no one should dare assume the responsible place of a teacher whose moral character is not such that it can be safely copied by his pupils.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR NOV.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

GRAMMAR.—1. Define voice. Give examples of the voice that a verb may have.

2. Conjugate the verb *drink* in the passive voice through the indicative mode.

3. Write the plural of the following nouns: Adz, bush, potato, embargo, two, zero, mouse-trap, Miss Jones, index, brother.

4. How many ways are there of distinguishing the masculine and the feminine gender? Give examples.

5. On what grounds may nouns be said to have two cases? on what grounds may they be said to have three cases?

6. Analyze the following sentence: He that would honor win must not fear dying.

7. State the point of likeness and difference between a clause and a sentence.

8. That he should go is desirable. Write four other sentences expressing the same thought as that expressed in the above sentence.

9. I know whom you mean. He will send whomever you want. Give all the uses of whom and whomever in the above sentence.

10. Compare the following adjectives and adverbs: Ill, far, many, near, eloquent.

PHYSIOLOGY.—What are five of the most important habits that the study of Physiology should impress upon students? Explain fully the bearing which each habit named has upon the preservation of health.

SCIENCE OF TEACHING.—1. State the most important conditions of perfect memory.

2. Name and define the two general functions of the imagination.

3. What are the leading objects to be accomplished by the study of U. S. History in the public schools?

4. Describe in general terms a method for teaching composition in the grades below the high school.

5. What should be the character of the language instruction of the first years of the child's school life?

6. By what methods would you teach spelling to children?

7. What are the objects of written examinations?

ARITHMETIC.—1. When it is noon at 23° , $20'$, $49''$, w. long., what time is it at 74° , $39'$, $11''$, e. long.?

5. 5.

2. $\frac{1}{2} \div \frac{3}{8}$ and give reasons for your process?

3. 3. 4.

3. How many yards of cloth at \$4.50 per yard must be given for 2 bales of sheeting, each 50 pieces, each piece 40 yards, at $6\frac{1}{4}$ cents per yard?

5. 5.

4. For what must a note be given in bank due in 60 days, which discounted at 8% per annum, will yield \$10,000?

5. 5.

5. A broker sold 2000 barrels of flour at \$5 per barrel, receiving 5% commission; he invested the net proceeds in coffee at 30 cts. a pound, receiving 2% commission on the amount invested; what commission did he receive?

5. 5.

6. Extract the cube root of 91.125.

7. If a pole 150 feet casts a shadow of 80 ft., how high will a tower be that at the same time casts a shadow 110 feet?

5. 5.

8. A ship sailed 400 miles due west, thence 500 miles due north, breaking its rudder it drifted due south 200 miles; how far was it then in a straight line from the point of sailing?

5. 5.

9. If 2 men and 5 boys can do a piece of work, and working at the same rate, 3 men and 3 boys can do it, what proportion of a man's work does each boy do?

5. 5.

10. What is the weight of water in grammes which fills a vessel holding 1 cubic metre?

5. 5.

✓ HISTORY.—1. State four European nations that made settlements within the present limits of the United States, and name a State that was settled by each.

2. What were the provisions of the Missouri Compromise? What causes led to its adoption, and what to its repeal?

3. What caused the French and Indian wars? What was gained by it?

4. Tell, in brief, what you know of Miles Standish, Oglethorpe, Ericsson.

5. Give an account of "Sherman's March to the Sea"

READING.—1. State two objections to concert reading. Two arguments in favor of it.

2. Which ought to receive the most attention, oral reading or silent reading? Why?

3. What preparation ought a teacher to make before conducting a recitation in the Second Reader?

4. Name three American writers of fiction, and state two characteristics of the writings of each.

5. Name five books that you consider suitable to be used as supplementary reading by a class in the Fifth Reader.

6. Read a selection of prose and one of poetry. 50.

GEOGRAPHY.—1. What is the relation of difference in longitude to difference in time? Illustrate.

2. Locate Venice, Panama, Sofia, Copenhagen, Para.

3. Name some State in the Union about equal in size to England.

4. Through what waters would you pass on a voyage from Frankfort on the Main to Toronto?

5. What is the character of the coast of North Carolina?

6. Name the capitals of Vermont, Nebraska, Texas, Tennessee, Brazil.

7. Why are there no large cities in Florida?

8. What are the chief products of France? of China?

9. Compare the climate of Indiana with that of California?

10. Where is the Congo Free State? Where is Bulgaria? Where is Zululand?

ANSWERS TO PRECEDING QUESTIONS.

✓ HISTORY.—1. *a.* Spain—Florida. *b.* France—South Carolina. *c.* English—Virginia. *d.* Dutch—New York.

2. The invention of the cotton gin made slave labor, where practicable, so valuable that the South determined at all hazards to extend slave territory, while the North, anxious to be rid of the institution, resisted these efforts. When Missouri applied for admission as a State

the Southerners determined that it should be slave. The controversy in Congress became exceedingly violent, and was only quieted by the influence of Henry Clay, at whose suggestion a compromise was effected which admitted Missouri as a slave state, but forever prohibited slavery thereafter in any territory west of the Mississippi and north of latitude 36° 30', the southern boundary of the new state. This compromise was not effective, for in 1853 Stephen A. Douglas introduced into Congress his celebrated Kansas-Nebraska Bill, in which he contended for the right of the settlers in the territories to determine the form of their own state governments. As this was an absolute repeal of the Missouri Compromise, it was strenuously resisted by the North as a whole, but was adopted in 1854, without, however, increasing slave territory in the North.

3. *a.* The contest between the English and French concerning the territory west of the Alleghenies. The English held the lands east of this and so shut in the French, who claimed and largely occupied the lands along the Ohio and in the Mississippi Valley. These possessions were comparatively valueless without free access to the ocean. *b.* The effects were to largely impoverish the colonies in men and money; while the English were to a very great extent successful in the war, the colonists knew that they had done more to bring about the success than England had; it caused them to understand their strength and made them think for themselves; in fact it, to a great extent, laid the foundation for the successful prosecution of the Revolutionary war.

4. *a.* Miles Standish was one of the emigrants on the May Flower, and became the military leader of the colonists against the Indians. Falling in love with a maiden who had also been on the May Flower, he employed his secretary, John Alden, to do his courting, with the usual result; Priscilla married John and not Miles. *b.* General Oglethorpe desiring to found a colony for the relief of poor debtors of England obtained a charter from George II, for lands which he called Georgia, founding the colony in the same year in which Washington was born. His restriction on the colonists, giving the men but limited lands; allowing no woman to inherit lands; forbidding the importation of men or slaves, caused so great discontent that the charter was surrendered to the King. *c.* John Ericsson was a very successful Swedish engineer, the inventor of the Caloric Engine, and inventor and builder of the Monitor, whose successful contest with the Merrimac has radically changed the whole complexion of naval warfare.

5. It had been clearly seen in the early part of the Civil War that the final success of the North involved the cutting of the Southern forces into two parts and preventing their union afterwards. The operations of Thomas and the advance of Hood upon Nashville enabled Sherman to begin, prosecute and finish this important object. A devastation of a tract of country three hundred miles long and sixty

miles wide, the destruction of railways and all means of communication between the country north and south of this line led to a feeling of despondency in the very heart of the Confederacy, and eventually led to the full and complete success of the North.

✓ GEOGRAPHY.—1. Difference in time *depends* upon difference in longitude. For every 15° difference in longitude, there will be a difference of one hour in time. Hence, if one place is 45° west of another, there will be three hours difference in time between the two places.

2. Venice is situated in the northeastern part of Italy, at the head of the Adriatic Sea; Panama is on the southern side of the Isthmus of Panama, on the Pacific coast; Sofia is in the southwestern part of the province of Bulgaria; Copenhagen is on the eastern coast of the Island of Zealand; Para is situated at the mouth of the Para River, in the northeastern part of Brazil.

3. *Alabama*, (50,722 square miles); England, (50,922 sq. miles).

4. Main River, Rhine River, North Sea, Strait of Dover, English Channel, Atlantic Ocean, Gulf and River St. Lawrence, Lake Ontario.

5. The coast of North Carolina is lined with long, narrow islands, separated by numerous inlets. From these islands, shoals extend far out into the sea, rendering navigation very dangerous. North of Cape Lookout are two extensive Sounds, separated from the Sea by the islands. South of Cape Lookout, narrow lagoons lined with shifting sand-bars separate the islands from the mainland.

6. *a.* Montpelier; *b.* Lincoln; *c.* Austin; *d.* Nashville; *e.* Rio Janeiro.

7. The conditions favorable to the formation of large cities are mostly wanting in Florida. Although there is an extended line of sea coast, there are almost no good harbors: there are no large manufacturing or agricultural interests, and a large part of the state is swamp-land.

8. The chief products of France are the cereal grains, beet-root, the vine, orange, olive, and mulberry, tobacco and maize. Of China, rice and tea are the staple products.

9. The climate of Indiana is very variable and subject to wide extremes in temperature, while that of California is very equable. In California, the year is also divided into the rainy and the dry season, while in Indiana there is the regular succession of seasons belonging to the Temperate Zone.

10. Congo Free State is situated on the west coast of Africa, south of the Equator. Bulgaria is in the southeastern part of Europe, between the Danube River on the north and the Balkan Mountains on the south, separating it from Turkey. Its eastern border is on the Black Sea. Zululand is in the southeastern part of Africa, on the coast of the Indian Ocean.

GRAMMAR.—I. Voice is the property of transitive verbs which shows whether the subject acts or is acted upon. *a.* Active voice; as, "Shakespeare *wrote* many plays." *b.* Passive voice; as, "Many plays were written by Shakespeare."

2. The water is drunk, was drunk, has been drunk, had been drunk, will be drunk, will have been drunk.

3. Adzes, bushels, potatoes, embargoes, twos, mouse-traps, the Misses Jones or the Miss Joneses, indexes or indices, brothers or brethren, zeros.

4. There are three ways: 1. By different words; as, *man*, *woman*. 2. By different endings; as, *hero*, *heroine*. 3. By a distinguishing word; as, *man-servant*, *maid-servant*.

5. As to *form*, nouns may be said to have *two* cases, the nominative and possessive, the latter being formed by annexing the apostrophe and the letter "s" to the former. As to their relations to other words, they must have *three* cases, as they may be the subject or the object of verbs, and also may denote possession or ownership.

6. "He that would win honor must not fear dying," is a complex declarative sentence, of which *He that would win honor* is the logical subject, and *must not fear dying*, the logical predicate. *He* is the subject nom., modified by the relative clause *that would win honor*, of which *that* is the subject, and *would win* the predicate, modified by the object *honor*. The principal pred. verb *must fear* is modified by the adverb *not*, and by the participial object *dying*.

7. A sentence expresses a complete thought. A clause is a part of a complex sentence and does not express a complete thought. They are alike in that each has a subject and predicate.

8. *a.* It is desirable that he should go. *b.* His going is desirable. *c.* It is desirable for him to go. *d.* For him to go is desirable.

9. *Whom* includes the relative and its antecedent, is the object of *know* and *mean*, and is the connective; or, we may consider *whom you mean* as the object of *know*. Then *whom* is the object of *mean*. *Whoever* is an indefinite relative, equivalent to *any person whom*. It is the object of *will send* and *want*; or, *whomever you want* may be considered the object of *will send*, and *whomever*, the object of *want*. In this case the antecedent is indefinite and need not be considered.

10. Far, farther, farthest.

Ill, worse, worst.

Many, more, most.

Near, nearer, nearest, or next.

Eloquent, more eloquent, most eloquent.

ADDENDA.—Mistakes will occur. The poor printer or proof-reader or answerer of the questions is responsible. However, in the Nov. Journal, No. 9 should read as follows: The subject nominative is *star*,

modified by *the*, *bright*, and *morning*, adjectives; and also by the appositive *harbinger*, etc. In the Dec. issue a part of No. 3 should read, "which is used substantively and is the object of *hopes*."

PHYSIOLOGY.—1. The habit of erect carriage and position of the body at all times. This allows full and proper play for all the organs and consequently aids much in their proper development. It also adds to the personal appearance.

2. The habit of thoroughly chewing the food and of eating in proper quantity. Good digestion can be secured in this way only, and upon good digestion depend the comfort, the happiness and the length of life of the individual, to a very large extent.

3. The habit of taking regular and systematic exercise in the open air. Thus the muscles have sway, the circulation of the blood is facilitated, the brain is relieved, the system generally is aided in removing effete matter.

4. The habit of thorough cleanliness of person. This allows the skin, with its extensive excretory apparatus, to remove much waste or useless matter from the body, thus relieving the lungs and kidneys; with its absorptive apparatus to take in much that is helpful to growth; and with its perspiratory apparatus to keep the body in proper temperature. This habit also promotes personal self-respect and the respect of others, and tends to prevent vice.

5. The habit of taking a proper amount of recreation. The brain, the chief center of nervous impulses, exerts a wide-spread influence over the body. Its state should be that of free, unimpeded and lively activity, for with its condition the whole body sympathizes. This state can only be secured by relieving it occasionally from the tension to which constant study or business subjects it. A man owes something to his friends and to the community at large as well as to his selfish interests or to science or learning.

READING.—1. *Objections*: There is no individuality in concert reading and the teacher is unable to locate faults; also, *imitation* is made the basis for inflection, emphasis, etc., whereas thought and feeling should control the expression. *Arguments in favor*: Timidity and an imperfectly trained ear may partly be rectified in this way; regularity of utterance as to time may also be acquired, in part.

2. Whether oral reading or silent reading is to receive most attention depends upon the age of the pupil and the purpose of the particular recitation; but, in a general way, silent reading demands most consideration, (*a*) because good oral reading depends largely upon accurate silent reading, (*b*) because nine-tenths of all the reading a pupil is to do in that life to which the school is preparatory is to be silent reading.

3. He should read the lesson over (*a*) to get its thought and sen-

timent, (b) to ascertain its probable difficulties for the pupil, (c) to select the words upon the pronunciation or the meaning of which the pupil is likely to stumble, that he may remove these obstacles, or assist the pupil to remove them, before the recitation commences. The teacher should further comprehend the lesson so well as to know what parts of it are best adapted for strengthening particular pupils.

4. James Fenimore Cooper is an American writer of fiction whose works are designed to give accurate pictures of early frontier life, and especially of that life as associated with the Indians. A good portion of his writings is also devoted to the Sea. Nathaniel Hawthorne is a second noted American writer of fiction, his works containing deep pathos and, at times, a weird association with the supernatural that gives to portions of them a peculiar sombreness. W. D. Howells is a very prominent writer of humorous character sketches at the present time. He is thought by some to produce what might be termed "American" novels.

5. Five books that might be suitably used as supplementary reading by a Fifth Reader class are: Irving's "Sketch-Book"; "Tom Brown's School Days"; Lamb's "Tales from Shakespeare"; Longfellow's "Evangeline"; Hawthorne's Story Books.

$$\text{ARITHMETIC.—I. } \frac{(23^{\circ}, 20', 49'') + (74^{\circ}, 39', 11'')}{15} = 6 \text{ h. } 32 \text{ mi. P. M.} \quad \text{Ans.}$$

$$2. \frac{1}{3} + \frac{5}{8} = \frac{1}{3} \times \frac{8}{8}, \text{ or } \frac{8}{24}. \quad 1 + \frac{5}{8} = \frac{8}{8}; \quad \frac{1}{3} + \frac{5}{8} = \frac{1}{3} \times \frac{8}{8}, \text{ or } \frac{13}{24}. \quad \text{Ans}$$

$$3. \frac{2 \times 50 \times 40 \times 6.25}{4.50} = 55\frac{4}{9} \text{ yd. Ans.}$$

$$4. \frac{\$10000}{(\$1 - \$0.014, \text{ Bank Discount})} = \$10141.987. \quad \text{Ans.}$$

$$5. \quad 2000 \times \$5 = \$10000. \quad 5\% \text{ of } \$10000 = \$500, \text{ com.} \quad \$10000 - \$500, \text{ com.} = \$9500. \quad \$9500 \div \$1.02 = \$9313.725, \text{ am't invested.} \quad \$10000 - \$9313.725 = \$686.275, \text{ total com.}$$

$$6. \sqrt[3]{91.125} = 4.5.$$

$$7. \quad 80 \text{ ft.} : 110 \text{ ft.} :: 150 \text{ ft.} : ? \quad 206\frac{1}{4} \text{ ft. Ans.}$$

$$8. \quad 1 \sqrt{(400)^2 + (500 - 200)^2} = 500 \text{ mi. Ans.}$$

9. 2 men + 5 boys can do the work; 3 men + 3 boys can do same. When 1 man was added to force, 2 boys could be dismissed; therefore one boy does $\frac{1}{2}$ of a man's work.

$$10. \quad 1 \text{ cu. meter} = 1000 \text{ cu. decimeters.}$$

$$1,000 \text{ cu. centimeters} = 1 \text{ cu. decimeter.}$$

$$1,000 \times (\text{cu. decimeter}) \times 1,000 \text{ cu. centimeters} = 1,000,000 \text{ cu. centimeters.}$$

$$1 \text{ cu. centimeter} = 1 \text{ gram.}$$

$$1,000,000 \text{ cu. centimeters} = 1,000,000 \text{ grams. Ans.}$$

SCIENCE OF TEACHING.—1. A clear conception and frequent repetition.

2. To make new combinations and new creations. In making new combinations it combines old perceptions into new forms. "A land flowing with milk and honey" is an example of a combination of old conceptions. In forming new creations, it forms ideals which are not composed of previous conceptions. Ideals of beauty that are superior to any in nature may be formed.

3. To make pupils intelligent as to the past history of our country; to develop judgment; to prepare the pupil for patriotic and intelligent citizenship.

4. See that the pupils have something to say. Teach them how to learn this from objects, pictures, poems and other printed matter. Have them say it in writing. Criticise and return for correction. In criticising notice punctuation, capitalization and construction of sentences. Talk about the general mistakes to the class.

5. It should be confined wholly to the art side of language. The child should be taught to use words in order to express his thoughts.

READING CIRCLE DEPARTMENT.

OUTLINES FOR JANUARY.

HAILMAN'S LECTURES ON EDUCATION—LECTURE IV.

The educational ideas of the Romans are the subject-matter of Mr. Hailman's fourth lecture.

We should expect a powerful epoch-making nation, like the Romans, to have an instructive system of education. We shall not be disappointed. While Rome offers no such names as Socrates, Plato and Aristotle, it is not deficient in a history of education which is full of interest and value.

The education of Judea was eminently religious or priestly; that of Greece was permeated with the Greek instinct of beauty and harmony; that of Rome is practical. The education of Judea was designed to render its pupils proficient in the usages and traditions of the national religion. The Greeks sought to give their children beauty and grace of body, elegance of movement and manners, and skill in the use of the national language. But, in strong contrast to both these nations, the Romans sought to educate their children to become men and women of affairs. The boys were to become soldiers, business men or managers of estates; the girls, mothers of families. Thus Roman education was the first illustration on a great scale of the modern utilitarian idea that education should be practical. The direct end of such

education is productive skill in some employment which ministers directly to our material wants. The Romans first practiced on a grand scale the adage, "Teach a boy what he will practice when he becomes a man." They had thus taken the initial step in our modern idea of learning by doing, but they interpreted the principle as "Learn to do by learning," rather than "Learn to do by doing."

The education of Rome was a necessary step in the emancipation of the human race. So long as training was confined to religion and the arts of grace and beauty, it belonged only to the powerful and wealthy. The moment, however, it took on the utilitarian idea, high and low shared it theoretically alike. The slave had need of it to increase his efficiency, as the master had need of it to increase his power and his enjoyment.

We need to distinguish carefully between the education proposed by Socrates, Plato and Aristotle, and that practiced by the Romans. In one regard they are alike; in another, different. The Greeks proposed to make *practical* thinkers, logicians, soldiers and statesmen; the Romans proposed to make practical persons in the material concerns of life—buying, selling, fighting, the mechanical industries and every-day work. This it was that rendered the Romans stolid and brutal, before they were tamed down by an importation of Greek ideas and civilization.

From the founding of Rome to the third century, B. C., the education is a barbarous, indigenous kind. The aim was to produce hardy warriors for conquest or defence. But in the century named the Romans began to import Greek thought and Greek methods of education. Schools were founded and a taste sprang up for subtle dialectics and fine phrases. The rough utilitarian idea of the early Romans gave way to modification by the ideal education of Hellas.

We notice that so far no emphasis is placed on the quality of the teacher. The Roman teacher, like his brother in Hellas, was a *pedagogue*—a slave, who, as Plutarch says, was "a drunkard or a glutton and unfit for any other business: to him they assign the government of their children." In quality, the Greek and Roman pedagogue was greatly inferior to the Jewish teacher, who belonged to the priestly class. In both pedagogue and teacher there was no differentiation of teaching from the other calling of the person who taught.

The names associated with Roman education are those of Cicero, Varro, Quintilian, and, later, Plutarch. The last of these only elaborated anything which could be called a system of training. Cicero merely drops a hint here and there, as to aims and methods in education. Varro is said to have written text-books on grammar, rhetoric, history and geometry. If he did, they are lost. Quintilian has written much on methods of education in his *Institutes of Oratory*. Plutarch is the first Roman writer who has bequeathed us a distinctively

educational work. His extant works are two: *Of the Training of Children* and *Conjugal Precepts*. The first deals with the general education of children, and the second with the education of women. The essay on *Training* recognizes the value of family training, and thus forms a sharp contrast to the old ideas. In the *Precepts*, we have the first intimation of the modern conception of woman's education.

AUTHORITIES.—For a brief outline of Roman education in general, see Browning's *Educational Theories*; or article on *Education*, in *Encyclopædia Britannica*, by same author.

For the place of Roman ideas in the Evolution of Educational ideas, see Rosenkranz' *Philosophy of Education*: D. Appleton & Co., Publishers.

For the history of Roman education in general contrast and comparison with contemporaneous education, see *History of Education*, by F. V. N. Painter: D. Appleton & Co.

For special treatment of Quintilian and Plutarch, see Compayre's *History of Education*: D. C. Heath & Co., Boston. S. S. PARR.

MENTAL SCIENCE—WATTS ON THE MIND.

SUBJECT: "Conversation."—pp. 79-101.

I. CROSS REFERENCES.—1. Introductory to Chap. VIII re-read Sec. IV, pp. 38-41, on 'Conversation.' 2. With Sec. XXII p. 88, read Sec. XI, p. 78. 3. With Sec. IX, p. 98, read Sec. X, p. 26.

II. PROFESSIONAL ITEMS.—1. Concerning social intercourse with children, Sec. II, p. 79. 2. The tendency of teachers to become dictatorial, Sec. VI, p. 81; XXII, p. 88. 3. Assumption of superior knowledge, Sec. XIV, p. 84. 4. Definitions in teaching and conversing, Sec. VII, p. 97.

Few things that have appeared in this course of reading in two years have been more important to teachers than these four points. They are worth digestion.

III. SUMMARIES.—1. The True Ends (rules) in Conversation: *a.* See frequent intercourse with superiors. *b.* Waste no time in trifling talk. *c.* Aim to learn something of every one. *d.* Take no offense at contrary opinions. *e.* Be ready to confess ignorance that you may learn. *f.* Avoid mere party spirit.

2. The Hindrances to Right Conversation, p. 91.

3. Rules for Legitimate Controversy: *a.* Find some accepted ground of agreement. *b.* Clear the question of controverted terms. *c.* Make the question specific. *d.* Seek truth, not victory.

IV. QUOTATIONS TO BE MEMORIZED.—1. "If we would improve our minds by conversation, it is a great happiness to be acquainted with persons wiser than ourselves."

2. "Whatsoever company you are in, waste not the time in trifle and impertinence."

3. "Be not provoked at opinions different from your own."
4. "In all intercourse, let your modesty, patience, and a friendly temper be as conspicuous as your zeal."
5. "Learn to bear contradiction with patience."
6. "When you retire from company, converse with yourself in solitude."
7. "So afraid is human nature of parting with its errors and being overcome by truth."

V. COLLATERAL EXTRACTS.—1. "Before a man can speak upon any subject it is necessary to be acquainted with it."—*Locke*.

2. "The first ingredient in conversation is *truth*; the next, *good sense*; the third, *good humor*; the fourth, *wit*."—*Sir Wm. Temple*.

3. "One of the best rules in conversation is, never to say a thing which any of the company can reasonably wish we had left unsaid."—*Dean Swift*.

4. "Earnestness and sincerity are orators whose persuasions are irresistible."—*Alcott*.

5. "Not only to say the right thing in the right place, but, far more difficult still, to leave unsaid the wrong thing at the tempting moment—this is the art of conversation."—*Sala*.

6. "There is no conversation so agreeable as that of the man of integrity, who hears without any intention to betray, and who speaks without any intention to deceive."—*Plato*.

7. "The beauty of conversation consists in its suggestiveness, its unexpectedness, its saliency. It does not overbear, or silence the timid and bashful."—*Alcott*.

8. "Method is not less requisite in ordinary conversation than in writing, provided a man would talk to make himself understood. The man who does not know how to methodize his thoughts has always 'a barren superfluity of words'—the fruit is lost in the exuberance of leaves."—*Addison*.

9. "Conversation presumes a common sympathy in the subject, a great equality in the speakers, absence of egotism, and a tender criticism of what is spoken. All men talk, many argue, few converse."—*Alcott*.

10. "The advantage of conversation is such that, for want of company, a man had better talk to a post than let his thoughts lie smoking and smothering."—*Jeremy Collier*.

R. G. BOONE.

HISTORY.

Green's Shorter History of the English People.

Advanced Work—Pages 235 to 355. Give SPECIAL ATTENTION from pages 301 to 355.

1. The mother of Edward III was Isabella, daughter of Philip the Fair of France. Edward III claimed the French throne through his

mother; but the Salic Law which obtained in France confined the succession to the *male* line of descent, and after the death of Charles IV of France, who was the uncle of Edward III on his mother's side, the French Peers decided that the French crown belonged to Philip VI of Valois, cousin of the late French King. Edward III of England appealed to arms to obtain the French throne for himself, and, hence, began the "Hundred-years War."

2. The Black Prince, son of Edward III, having died before he reached the throne, his son, Richard II, received the crown; but he inherited little of the brave spirit of his ancestors and amid the dissensions of his reign, his cousin Henry (son of John of Gaunt), who had been banished, returned to England, deposed Richard, and himself received the crown, and thus became Henry IV of England, and *first* of the House of Lancaster; but he had no *legal* right to the throne, as he was a descendant of the *fourth* of Edward III, and Edmund Mortimer was still living, who was a descendant of the *third* son of Edward.

3. Henry V of England, son of Henry IV, married Catharine, daughter of Charles VI of France, their son became Henry VI of England and also heir to the French throne; but unfortunately Henry VI inherited the weaknesses of his French grand-father, hence the dissensions among his subjects opened the way for the rival House of York to lay claim to the English throne; they made this claim in behalf of Richard, Duke of York, a descendant of Edward III's *third* son. An insurrection of the lower classes breaking out about this time, the Duke of York espoused their cause against the King and the Royalists, and in the battle of St. Albans defeated the Royalists and took the King prisoner, and thus began the "War of the Roses," which was terminated by the marriage of Henry VII, of the House of Lancaster, to Elizabeth of York.

Points of Special Interest.—*a.* The Lollards. *b.* The Revival of Learning. *c.* The Printing Press. *d.* The great Discoveries in Science. *e.* The introduction of gunpowder and modern warfare. *f.* The general opening up of communication with the different parts of the world; and hence increase of general intelligence. *g.* The general results of the Hundred-years' War and the War of the Roses. Note the struggle of the Barons with the King, and the common people again with the Barons for their respective rights. *h.* Note the struggle of the noble men who pushed education in spite of carnage, ignorance, and superstition. Let us at least learn *when* and *where* they lived and something of *how* they persevered, that we may at least catch an inspiration from those great names which shall live forever.

NOTE.—Remember that Henry VII governed a *new* England, so different from the *old*, in thought, in inspiration, in purpose, that it might be truly said she had been born again. Feudalism had spent its force, the Baronage had in turn with the King yielded its monopoly,

the reformation had begun its work, the Printing-press was fast making all men equal, and mankind generally was beginning to readh out toward the millenium :—

" They looked ; aside the dust-cloud rolled,
The waster seem'd the builder too ;
Uppringing from the ruined old
They saw the new.
'Twas but the ruin of the bad,
The wasting of the wrong and ill ;
What'er of good the old time had
Was living still."

REMARK.—Make a special study of the time of Henry VIII ; watch the workings of his great diplomats ; it is a fine field for the study of character. Notice the relation of England and Catholicism at the beginning and close of Henry's reign.

COLLATERAL READING.—Commit to memory the speech of Wolsey in Shakespeare's Henry VIII. Notice three beautiful little poems of Mrs. Hemans, entitled respectively : "The Homes of England" ; "The Curfew song of England" ; and "Joan of Arc at Rheims." It will keep up our Scotch interest to re-read Ivanhoe and Lady of the Lake, while Burns' Cotter's Saturday Night will help us to remember that,—

"From scenes like these Old Scotia's grandeur springs."

"Careless seems the great Avenger ; history's pages but record
One death-grapple in the darkness 'twixt old systems and the Word ;
Truth forever on the scaffold, wrong forever on the throne,—
But that scaffold sways the future, and beyond the dim unknown
Standeth God within the shadow, keeping watch above his own."

MATTIE CURL DENNIS.

MISCELLANY.

QUERY.—"Is Cleveland, Ohio, a seaport town?"

Ans.—No. It is a "lakeport" city.

WINCHESTER.—The schools are moving on without a jar. Supt. C. H. Wood, with his new "type-writer" to assist him, is master of the situation.

ADAMS COUNTY held a very successful association Dec. 4th. Six school officers and over 60 teachers were present. J. F. Snow is the superintendent.

THE LA GRANGE Co. Association, held Nov. 26-7, was attended by more than a hundred teachers and was voted a great success. Supt. Machan is working hard and his efforts are not in vain.

PUTNAM COUNTY.—The second annual association, held Nov. 26-7, was a great success. The attendance was large and the work excellent. Supt. Smedley is the right man in the right place.

QUERY.—Divide \$1,000 to-day among three boys, A, B & C, aged respectively 14, 16, and 18 years, so that each boy's money put to interest at 6%, each will have the same amount when the youngest becomes of age?

CARROLL COUNTY makes a good report. It sends out a neat manual. Most of the teachers are engaged in the Reading Circle. The township schools are well attended, and the Reading Circle work adds much to their interest. Supt. J. L. Johnson is superintending the work.

✓ THE Parke County Teachers' Association had a large and very interesting meeting at Rockville on the Friday and Saturday following Thanksgiving. Among the interesting features was the oratorical contest, the judges in which were Prof. S. S. Parr, of Greencastle, Mrs. E. E. Smith, La Fayette, and Miss Ruth Morris, Terre Haute.

THE attendance at the colleges of the state this year is unusually large. The number enrolled in the college classes alone is as follows: De Pauw, 210; State University, 202; Purdue, 143; Earlham, 111; Hanover, 98; Wabash, 92; Franklin, 69; Rose Polytechnic, 67. De Pauw has much the largest preparatory department; including this and the special schools, the entire enrollment reaches 618.

THE PRINCETON public schools had a most successful celebration of Arbor Day on Friday, Nov. 26. It consisted of exercises in Euterpe Hall by the pupils of the schools, consisting of hymns, recitations, essays, etc., all most suitable to the occasion and showing evidence of admirable taste in their selection. Prof. A. J. Snoko has been in charge of the Princeton schools for a number of years, and whatever he does, is well done.

✓ THE STATE UNIVERSITY was never before in so flourishing a condition. The attendance is large and the enthusiasm commendable. Dr. Jordan is succeeding admirably in bringing the institution into vital relations to the people. The catalogue having been exhausted a "supplementary circular" has been issued containing the main facts. A small circular has also been issued stating that President Jordan and several members of the faculty will engage to deliver lectures and do institute work.

THE NATIONAL EDUCATIONAL ASSOCIATION will meet this year at Chicago. This being the one-hundredth anniversary of the Organization of the Northwest Territory there seems to be a special fitness in holding the Association within the borders of that territory. The officers have gone to work in earnest, and the effort will be made to make this meeting the largest and the best. In connection with the meeting will be an Educational Exhibit, of which Albert G. Lane of Chicago will be superintendent. Write to him for particulars, and begin to prepare your work at once.

P E R S O N A L .

W. J. Hutcherson is principal at Whiteland, and is running a course of lectures.

Dr. T. C. Mendenhall is now at his post as President of Rose Polytechnic Institute, Terre Haute.

Messrs. A. S. Barnes & Co. have moved their Chicago office to Nos. 263 and 265 Wabash Avenue.

Miss Sarah E. Tarney, of the Bourbon high school, has accepted a position in the State Normal Training School.

D. M. Geeting is to be chief clerk in the Department of Public Instruction when Supt.-elect La Follette takes his place.

Geo. W. Thompson, teacher of Drawing in the State Normal School, was recently married to Miss Alice Irwin, of Rensselaer.

H. C. Fellows, formerly of this state, is now teaching in Wilmington (O.) College. He will engage to do institute work in Indiana.

J. B. Ragan has sold his interest in the Richmond Normal School to his associate, Cyrus W. Hodgin, and has retired from the school.

B. G. Northrop, of Clinton, Conn., recently made the Journal office a friendly call while on his way to Columbus to address the State Horticultural Society.

W. M. Croan, formerly Supt. of Madison county, is now at the head of a normal school at Shenandoah, Iowa, and all reports say that he is making a grand success of the enterprise.

Dora Montgomery, formerly of Tipton, but now of Kansas, writes that she recently attended the Southern Kansas Teachers' Association and "one-third of the audience seemed to be ex-Indiana teachers."

The Journal is pleased to note the favorable reports that come up from Evansville concerning the management and work of Supt. J. W. Layne. Hoosierdom is always glad to welcome a live and progressive educator.

Mrs. L. G. Hufford, of the Indianapolis high school, will read a paper before the State Board of Agriculture on the occasion of its thirty-fifth anniversary, Jan. 5, on "The Place of Woman among the World's Workers."

B. A. Hinsdale, of Cleveland, O., formerly Supt. of the Cleveland schools, is now in the field as lecturer and institute worker. He is one of the brainiest men in the United States connected with educational work.

Dr. John S. Irwin, Supt. of the Fort Wayne schools, was recently disabled for some weeks, by reason of a severe dog-bite through a joint of his right hand. He doubtless had frequent occasion to say, "*dog-on't!*"

BOOK TABLE.

THE PRANG EDUCATIONAL CO. has in preparation a little work on "The use of Models in Primary Schools."

THE DE PAUW MONTHLY—The students' journal—is exceedingly well edited this year, is printed in good style, and is a credit to the students of the University.

CONTRIBUTIONS TO THE SCIENCE OF EDUCATION is the name of the new book by W. H. Payne, of Michigan University. Published by Harper & Bros. It will receive a fuller notice next month.

ST. NICHOLAS is the prince of magazines for young folks. Its illustrations which are most artistic, and its articles which are from some of the best contributors the country affords, give it rank with the very best of its kind.

HARPER'S WEEKLY still retains its rank as the leading illustrated newspaper this side of the Atlantic if not in the world, while *Harper's Bazar* is almost a necessity in every household where home ingenuity and home talent are employed in the construction and planning of home garments.

THE CENTURY MAGAZINE has increased its number of subscribers 30,000 since commencing "The Life of Lincoln." It was a lucky hit for the publishers, but the readers may consider themselves in luck too, in thus gaining such authentic information of the martyred President. The January issue is no whit behind in other attractions.

THE AMERICAN NEWSPAPER ANNUAL for 1886, published by N. W. Ayer & Son, of Philadelphia, is now out. It is the most complete book of the kind published. In addition to a complete list of all the papers of the United States and Canada, and all facts about them, the book gives population of states, territories, counties, cities and towns, political notes, etc. It is a valuable book of reference.

HARPER'S MAGAZINE for January is full, as usual, of *good things*. The first number of Kathleen O'Meara's Russian novel "Narka," will be found in it. This work promises to be a thrilling romance, mainly historical or concerning the common classes, but its development will expose many of the secrets of the land of the Czar and nihilists. Chas. Dudley Warner has an article on New Orleans, which is the first of a series on southern subjects. And these are only two of the great attractions this number offers.

FIRST WEEKS IN SCHOOL: Published by Ginn & Co., Boston and New York.

A little book, only 50 pp., for the child's *own use* in the school-room during the very first weeks. It abounds in matter to interest and in-

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struct the child when at his seat. This matter may be found in the short, bright sentences, in the colored pictures which afford exercises in number and material for both thought and language. Altogether it is most beautiful and most unique.

HOMESPUN YARNS: By Mrs. A. D. T. Whitney. Boston: Houghton, Mifflin & Co.

The name of Mrs. Whitney attached as the author of a story is a pretty good recommendation to most mothers. They know that such stories are wholesome and safe for their girls to read. This book is a collection of home stories. They profess to be Mrs. Whitney's personal experience and commence with "When I was a little girl." Like all Mrs. Whitney's writings for girls, they are bright, witty, full of apt comparisons between common things and common every-day living, and give many a brief sermon in such an admirable manner, that the reader never dreams she has been preached to.

D. LOTHROP & Co.'s monthly publications for the young are most charming. There is "Babyland" for the wee ones, with stories only two-minutes long, with big, bright pictures, strong paper and gay cover, for 50 cents a year.

Then there is "Our Little Men and Women" for children just growing out of babyhood, with short serial stories and charming illustrations; and there is "Wide Awake" for the boys and girls of larger growth. This is full of excellent things. The illustrations are very fine, many of the stories are full of healthful fun, while others abound in good sound sense, and the supplement gives solid, useful information, valuable alike to both old and young.

FROM MEADOW-SWEET TO MISTLETOE: By Mary A. Lathbury, New York: Worthington & Co.

The title of this book gives little conception of its contents or beauty. The title perhaps comes from the illustrations which range from the early spring-time when the meadows are full of blossoms to the bleak winter when the holly and mistletoe are in their glory. It is a book of pictures, alternate pages being full-page illustrations. It is a book for children, both pictures and reading-matter being such as children can grasp and appreciate. It is a book of nature, the illustrations and poems chiefly having some form of nature for their subject. The illustrations are from original drawings by Julius Bien & Co., New York, and are tinted but not colored. The binding is handsome, the paper is heavy, and parents who are seeking something for a gift for their young children that will be a delight at the same time that it will be an education, will do well to examine this and purchase.

INTRODUCTION TO BROWNING: By Hiram Corson, LL. D., Prof. of Rhetoric and English Literature in Cornell University. Boston: D. C. Heath & Co.

The object of this book is to afford the student some guidance in the study of Robert Browning's poetry, which the author says is the most difficult of all English poetry to understand because the most purely subjective. In his introduction, after discussing the spiritual ebb and flow of poetry from Chaucer to Tennyson and Browning, he dwells somewhat at length upon certain peculiarities in Browning's style which render it difficult of comprehension to the average reader. Chief among these peculiarities, he notes his monologue. The greater part of the book (338 pp.) is devoted to the arguments or analyses of certain poems; the mastery of which, Mr. Corson thinks, will give the student such an insight into the motives and purpose of the poet, that he will be led to seek a wider pasturage, not being quite content until he has an acquaintance, though it be but slight, with the complete works of this great poet, second only, in Mr. Corson's estimation, to Shakespeare.

BUSINESS NOTICES.

Thomas P. Ballard, of Columbus, Ohio, the agent for Ginn & Company, for Southern Indiana, Ohio, Kentucky and Tennessee, will be at the Grand Hotel during the meeting of the State Association and will be pleased to make and renew acquaintances with the teachers.

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ills. 1-tf.

BOOKS FOR THE YOUNG.—Special attention is called to the well selected list of books for young people, which may be found among the advertising pages this month, of Burrows Brothers & Co., of Cleveland, O. 5

TEACHERS WANTED!—Of all kinds. Principals, and Assistants; also several for Art, Music, etc. Application-form and information free. Address: THE CORRESPONDENCE UNIVERSITY, Chicago, Ill. 5-1y
desire it.

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No. 2.

ON LEARNING GEOGRAPHY.

MICHAEL SEILER, STATE NORMAL SCHOOL.

ED. SCHOOL JOURNAL:—The attention of your readers is called to the article under the above heading in the September number of the Journal. The article in question purports to be a criticism of my contribution to the July Journal on the same subject.

I wish to review the position of the critic, but in doing so I shall waive, as wholly irrelevant, whatever in the nature of personal insinuations, his article contains.

Had the writer read my article with a mind unbiased by considerations foreign to the subject, he would have discovered that it deals, not with methods of *teaching* geography, but with methods of *learning* geography under the conditions that are necessarily incidental to work in the public schools. He would have discovered, moreover, that in the positions which it advocates it distinctly disclaims any reference whatever to primary work.

My positions, as stated in that article, are essentially two: (1) The pupils in the higher grades of the public schools must, of necessity, get by far the greater part of their knowledge of geography through books, maps, charts, pictures, and other forms of representation. (2) The study of geography through books yields a higher form of discipline to the mind than study through sense perception.

Both of these positions the critic attacks. Geography, he insists, should be studied "from nature"; and such study will

yield a higher discipline than the study of the subject by means of books.

That the higher phases of geographical study must have a *basis* in actual experience, (sense perception), amounts to a truism which nobody would care to dispute. The man who is to read and talk intelligently about rivers, oceans, islands, mountains, storms, etc., must, at some earlier period of his life, have come to a knowledge of those objects through sense perception. But the public school pupil in whose mind those fundamental ideas are not yet clearly defined is still in the *primary* phase of geography work, and is not contemplated in my article. In so far, therefore, as the critic argues against the use of text-books by pupils studying primary geography he fails to hit my article, and seems to have indulged himself in that harmless expedient of setting up a man of straw for the satisfaction of knocking him down.

There is, however, an issue between us upon the question whether the method of studying "from nature," i. e., the method of original observation and discovery, is applicable to geography in the higher grades of the public schools. The critic advocates this method; I deny that it is applicable except to a degree that is altogether insignificant.

To study geography is to study the earth in the character of a grand organism, and in its adaptation to the development of man. To study geography "from nature" is to study the phenomena of the earth by direct and original observation. But how apply the method of original observation and discovery to such an object as the earth? The writer mentions "Humbolt," (Humboldt), Carl Ritter and Arnold Guyot as examples of great geographers who studied the earth by this method. Well, how did those illustrious men, Humboldt for example, study the earth? Did he do it by studying the flat lands and the sluggish streams of his native little province of Mechlenberg? By no means. Nowhere in his writings is there a trace of that mild lunacy which suggests that to learn the geography of Thibet it is only necessary to study the mud flats of Berlin. Humboldt studied from nature indeed; but he did it by extensive travels in four continents. If he was able to give to the world authentic infor-

mation about the Amazon River, and of the powerful sweep of the trade winds over its vast basin, it was because he had traversed the river from its mouth to its source, and had learned of the winds by observations upon the spot. If he knew the altitude of Chimborazo he knew it from having actually climbed that giant mountain and measured it with his own hands. Ritter knew the geography of Europe from having actually visited nearly every nook and corner of the continent. Guyot covered nearly the same ground, and in addition the whole of the Appalachian Mountain region, and the Atlantic seaboard of North America.

Thus did those great men study geography "from nature." Their example is the decisive answer to the question—How study geography "from nature."

Now the point I wish to make is that the method of geographical study pursued by Humboldt, Ritter and Guyot *is precisely the method which would be absolutely impracticable* in the public schools. Allusion to such illustrious examples as these, therefore, if it prove anything for the critic proves entirely too much for his purpose. Nowhere do they sanction the absurd doctrine that to know the whole earth it is only necessary to study an infinitesimal fraction of it. The announcement of this doctrine is reserved for Mr. Scovell. Here is a discovery indeed! How very simple the study of geography becomes in the brilliant light of the method he proposes! If you would learn that such a continent as South America exists, that a great river crosses its northern end, and that a giant mountain system follows its western coast, study the geography of your native township! If you would learn that the surface waters of the Antarctic seas are drifting toward the northeast, study the phenomena of some familiar goose pond in your neighborhood! So, also, if you would acquaint yourself with the nature of tidal phenomena, just note carefully what takes place upon that same pond when the moon crosses its meridian!

But all this is sheer nonsense. The idea that it is possible to arrive at a knowledge of the whole earth through any kind or amount of study devoted to one's own township or county is a

dreamy absurdity, and a flat contradiction of the great masters whom the critic names, and to whom I have already referred. If the true method of studying geography "from nature" is the method the critic recommends, then Humboldt, Ritter and Guyot were in error.

But, notwithstanding his own palpable contradiction of the examples he cites, the critic insists that geography, since it is a branch of physical science, should be studied as other physical sciences are, i. e., through original observation. A moment's reflection must, however, reveal the fact that geography, in several important particulars, is totally unlike those other branches of science usually taught in the public schools. In the case of chemistry, for example, the thing to be studied is conveniently at hand. The elements are few in number. They can easily be brought within the compass of a room. They can be conveniently placed before the eyes and under the hands of the learner. The same is true of physics and physiology. I shall not deny, therefore, that for the study of such sciences as these, the method of original observation is easily applicable in the public schools, and it may be the best. But the materials necessary for the study of geography by this method can not be brought within the compass of a room, of a neighborhood, of a county or of a state. To study geography from nature necessitates extensive travel, as I have already shown; and since in public school work the necessary travel is impossible, this method of study is impracticable except to an insignificant degree. To claim, therefore, that pupils in the public schools should study geography as they study chemistry, physics and physiology, is to exhibit very plainly a want of acquaintance, either with the real nature of geographical science, or with the necessary conditions of public school work.

As to the assertion that "geography is the most poorly taught subject in the schools," it may be said that this is only one of those loose and sweeping declarations which we are accustomed to hear from croakers, and which, upon examination are found to have no foundation in fact. While one asserts that geography is the most poorly taught, another asserts the same thing about

grammar, and another about reading. The fact is, geography is taught no better and no worse than other school studies; nor is it at all probable that the methods now in vogue, whatever their defects, are ever likely to be improved by those raw suggestions which such one-sided critics are in the habit of offering.

My position upon the question of the disciplinary value of geography when studied by means of books is the critic's second point of attack. I had said that the right study of geography by means of books yields a higher disciplinary result than study by direct sense-perception, because the activity of the mind in sense-perception is of the lowest and most elementary character. In assigning this form of mind-action to a relatively low rank I had supposed myself to be on the solid ground of a psychological truism. This point, however, the critic is inclined to dispute. Sense-perception he exalts to a high place among the various forms of mind-action, and in support of his position he quotes Noah Porter as saying "that sense-perceptions are present in his (man's) loftiest speculations and most refined reasonings." The force and truth of the quotation nobody would think of disputing; but to use it as a proof that the activity of the mind in sense-perception is not of a low and elementary character is to quote Noah Porter in a way that would make that worthy smile. It is as though one should argue that because brick and mortar are used in the construction of a great edifice, therefore the labor of the hod-carrier who delivers those indispensable materials upon the spot where they are needed is of as high an order as that of the architect who planned the structure!

Sense-perception is the predominant activity of the child-mind, and of the mind of the savage. Moreover, it is an activity that yields no discipline worthy the name of culture. Real culture comes, not through the mere act of sense-perception, but through the subsequent elaborative processes of classification, generalization, analysis, comparison, etc. If the mere act of sense-perception yielded anything worthy the name of culture we might expect to find it in the Indian, who is a living example of persistent sense-training. But, on the contrary, we find, conjoined with senses of remarkable acuteness, an intellect dull and heavy

to the verge of stupidity. True culture comes through thinking; but the materials for thinking are not objects but ideas. In touching upon this subject a distinguished writer says, "in general, thought proper takes place with the greatest facility and sureness in the absence of sense stimulation. The assumption that intense sense-activity is conducive to thought proper is a vulgar error." This view of the nature of sense-perception is one upon which there is no difference of opinion among psychologists. Superior mental discipline is not a result of knowledge-getting by the process of sense-perception, because, in that process the action of the higher faculties is characteristically feeble. In the mental process of getting knowledge through language, (books), however, there is superior discipline, because in the process the higher faculties are necessarily enlisted in vigorous action. The application of this principle to the study of geography is obvious: the acquisition of geographical knowledge by the process of original observation and discovery yields a lower grade of discipline than such acquisition through books, maps, charts, etc.; and this would still hold true, even if the number of new ideas acquired by the one process were exactly the same as that in the other. But these numbers are not the same. To the pupil in the public school sense-perception alone could not furnish a thousandth part of the fact-matter which he must have in order to enter with effect upon those elaborative processes which the successful prosecution of the study requires. Books, charts, maps, etc., *do* furnish to him this fact-matter, and so make possible those processes of real thought from which alone the highest discipline results.

Whether, then, we consider the original act of getting geographical information, or the thought processes which are subsequently based upon this information, the disciplinary advantage is on the side of text-books.

THE true order of learning should be, first, what is necessary; second, what is useful; and third, what is ornamental. To reverse this arrangement is like beginning to build at the top of the edifice.—*Mrs. Sigourney.*

BLACKBOARD WRITING.

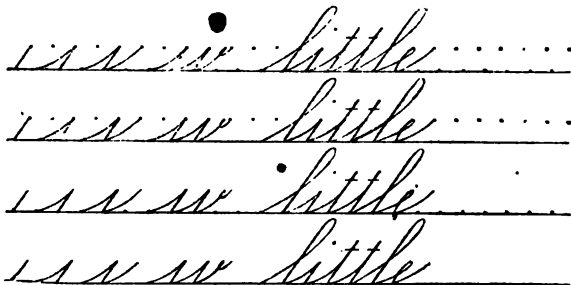
E. W. YOUNG.

ALL agree that a teacher should be able to write well with pen and ink, but very few think it *more necessary* to be able to write well on the blackboard. Let us examine the subject. A pupil may study the analysis of a letter, and secure a correct idea of its form, but as soon as he turns from this his ideal is strengthened or modified by the form which is most often before him. He looks at the perfect form at the top of the page in the copy-book for about one minute during the fifteen allowed each day for writing; the remaining fourteen minutes he is transferring to the page pre-conceived ideas, gathered from his model, the writing of the teacher. To be sure, he distorts these ideas somewhat, but an analysis will show the same defects in both. During the whole day he is unconsciously learning the form, correct or incorrect, from the blackboard writing of the teacher. This can be proved by a comparison of the writing of pupils under different teachers. If the teacher writes back-hand, the pupil, without instruction, will give to his writing that slant. Pupils who are promoted from one room to another will change their writing in a very short time, incorporating the eccentric points of the new teacher.

The writer has visited nearly all the city schools in the state, and has noticed that the secret of successful teaching of writing is to be found in the regular blackboard work of the teacher. The difference in the writing of teachers has compelled pupils to change their writing as often as they changed teachers. Some have thought it possible to overcome this want of uniformity by employing a special teacher of writing, who visits each room two, three, or five times each week, and places the correct forms before the pupils. Are the results of his work the same in all the rooms? Decidedly not. The standard of writing in such schools is always above that of schools which employ no special teacher, but only because the writing of the regular teacher is improved by the higher standard of the special teacher. He can do more good in a teacher's drill class in one hour, than by giving weeks

to correcting impressions left by imperfect writing of the teacher. The improvement secured by a special teacher must be accomplished through the regular teacher.

But few schools can afford to employ a special teacher. How, then, are the teachers to improve their writing? While improvement will be much more rapid under a teacher, any person can learn to write well upon the blackboard by following a few simple directions.



With a small brush and a little white lead, thinned with turpentine, draw a straight line, three or four feet long, on the blackboard. Divide this line into equal parts by dots, placed two inches apart, and having them show only on the upper edge of the line, as in the cut. Two inches above the first dot on the line, place another dot, at an angle of 52° with the lower one, and follow this with a row of dots two inches apart. Beginning with the straight line on main slant, at the upper dot, descend to the lower, as in the cut. First practice slowly, then increase the speed, until you can make about one hundred perfect strokes per minute. About seven inches below the first line, draw another, omitting the dots on the line. Beginning on the dots one space high, descend with a straight mark on main slant. Here you must determine the slant for yourself, practicing slowly at first, but gradually increasing the speed. Next, draw a line the same as the first, omitting the *upper* line of dots, and beginning one space high, at an angle of 52° , descend with the straight mark to the dot. In this you must determine the *height*. Lastly draw another line, without dots, and practice as before. Then take the right curve and straight line, and practice in the order given.

Take up the letters and words in the following order: *i, u, uu, w*, left curve and straight mark, *n, m, mine, r, run, s, sun, o, moon, a, man, t, tint, p, pint, d, dime, l, little, h, hint, b, but, k, kin, j, jump, y, you, g, gun, q, quile, z, zinc, f, fit*, etc. Never pass from one until you are able to write it rapidly and correctly. One of the advantages of this method is that the assistance is *gradually withdrawn* with each copy. Another is that the attention is directed first to the slant, then to the spacing, taking up one thing at a time.

By giving to this drill a few minutes each day you will soon be able to place perfect models before your pupils.

MICHIGAN CITY, IND.

+ MINUTES OF THE INDIANA STATE TEACHERS' ASSOCIATION.

INDIANAPOLIS, TUESDAY EVENING, Dec. 28, 1886.

The Teachers' Association of Indiana met in the thirty-third annual convention this evening at Plymouth Church. The exercises were opened with prayer by Rev. Dr. Tuttle of Wabash College.

The retiring President, E. E. Smith, in a very brief speech introduced his successor, C. W. Hodgins, who proceeded to deliver the inaugural address; subject—

"THE NEEDS OF OUR PROFESSION."

He spoke of the continuous advance in the science of pedagogy. Teaching had to be adjusted to the requirements of the age. It was seen that during a period of religious thought and inquiry the school partook much of that character; in an age of war it was, to a large extent, military, and in an industrial era it was adapted to the wants of workers. It is the latter character that belonged to the present, and this called for depths of scholarship and breadth of learning among teachers that are required by no other profession. Indeed, teaching should be ranked the first of the learned professions. He spoke of the age as one of machinery, bringing the world nearer together, and unifying civilization, and the teacher should be equipped with a thorough knowledge of mechanics and its inventions. It is not a time when we can dispense with all but the three R's. Whatever gives one a knowledge of nature is necessary. There is required now among workingmen a directive intellect to control the hands. They must know mathematics and mechanics, otherwise they will be but little better than paupers. Machinery has changed the demand from muscular to brain labor. He said that this was a time when the demand for schools was the same under every form of political government, for the mechanic must derive his education in the public schools or he will not be able

compete with the rest of the world. In offering this instruction the teacher requires a more comprehensive knowledge, not necessary for the pupil. It is one of the permanent needs of the profession; and another is that the teacher must know the child's mind. A third need is that which will lessen the dangers of malpractice; and then again it is necessary for the teacher to understand the school system in all its organic parts and its relation to society. He should also be free from cast-iron regulations. He should be free from ignorance, as to the history of teaching, in being conversant not only with the present methods, but with all that have been in use; for there is danger of adopting forms that, while appearing as improvements, are really nothing more than ancient ideas of theory and practice.

Miscellaneous business followed. On motion of W. A. Bell, B. C. Hobbs presented the claims of *The Correspondence Journal*, a monthly periodical published by Herr Molkenboher, of Bonn, Germany, and printed in three languages, French, German and English. It aims at "welding a link, ever increasing in strength in different countries, between the friends of the efforts to establish a permanent International Council of Education. All who desire to encourage this purpose can send a postal order for 3 marks=75 cents, to the Editor, accompanied by articles concisely written supporting the cause, and he will forward his paper. A letter to Germany should be prepaid by stamps of five cents. The magnitude of this enterprise will be seen when we consider the vast standing armies of Europe. The nations of the world need a system of instruction which recognizes that all are of one blood, which recognizes the manhood and brotherhood of man, and a literature which will embrace the true interests of all mankind. The United States, whose educational system is broad and full, and whose standing army is only 25,000 for 60,000,000 of people, is conceded the fit nation to move in favor of universal peace and good will among the nations. The statesmen and philanthropists are looking to us with desire. Our U. S. Senate has passed an appropriation bill to provide for a Congress of Delegates from the Republics of America and from other nations that choose to be represented, that a provision may be formulated for insertion in all their treaties, and a High Court established to settle international differences instead of appealing to the sword. Is it not fitting that the teachers of our country should saturate our educational policy with the principles of peace, good will and universal fraternity, that the wealth and strength of nations may be directed to the comforts of home by productive industry and useful arts?"

The committees and supplemental officers chosen were as follows?

On Reading Circle Board—Mrs. W. W. Byers, Terre Haute; F. A. Churchill, Aurora; A. E. Rogers, Danville.

On Auditing—Hiram Hadley, Bloomington; M. H. Stevens, La Fayette; E. E. Smith, La Fayette.

On Resolutions—Lewis H. Jones, Indianapolis; E. H. Butler, Rushville; Mrs. Hailman, Laporte; Miss Maggie Hill, Rensselaer; John P. Mather, Warsaw.

On Conference—D. W. Thomas, W. A. Bell, Joseph Carhart.

The assistant permanent secretary chosen for the session is Mr. Jas. R. Hart, Union City.

WEDNESDAY MORNING, Dec. 29.

The exercises were opened with prayer by Rev. O. C. McCulloch.

The first paper of the day was presented by James Baldwin, Supt. of the Greencastle schools, on the subject,

"THE GREAT POETS AS MORAL TEACHERS."

He said: There are those who question the utility of discussing subjects of this kind on occasions like the present. There are many who do not attend these meetings because the matters talked about are of so little practical utility. The drift of the times is toward the narrows of mercenary utility. Our methods of education help to swell the tide. We have asked, "What knowledge is of the most worth?" and we answer, "That knowledge which will put money into the purse—that knowledge which will make thy elbows strong to contend against thy fellows. In every human being there is a trinity of obligations and endowments, those of the body, those of the mind, and those of the soul. But while we care for the first and second of these, we deal with the third as a certain bird deals with her eggs—leaving them in the sand for chance and the heat of the sun to bring to life. We teach morals in carefully measured portions, lest some bright youth should get too much or a slow one too little. Just so long as the tape-line of question and answer and carefully-worded precept is the measure of moral instruction, that long will many of those for whom we are responsible fail to reach the full stature of perfect human beings.

The study of the natural sciences has done and is still doing much toward lifting us out of the narrow sordidness into which the tendencies of the times would lead us. But it is only when we get above and beyond the technicalities of the text-books into the pure realm of Nature itself, that our moral faculties are bettered, our heart-feelings touched and set aglow with the heat-rays of a higher life. The narrow notion of practical utility, if allowed to usurp the place which it covets, would drive the faculty of imagination from the human soul, would set matter above mind, and let reason banish faith. It would make of the earth a dry desert of realities overhung by a brazen sky, and empty alike of illusion and of hope; the grace of life shut out, and the beauty of existence crushed.

The imagination is the wonderful faculty which gives us the power to see, beyond the shows of things, the things themselves. Cared for and educated as it should be it becomes the leader and director of our other powers, the van-guard of all progress, turning distant possibilities into living realities. It is our Moses, freeing us from the bondage of flesh-pots and golden calves and instructing us in the laws and the blessed privileges of a higher life; leading us out of the barren wilderness of disappointing utility, and setting our feet upon the heights of Pisgah, where our eyes may behold boundless prospects of life and beauty inviting us to enter and possess.

Seeing then, that this sixth sense of ours has so much to do with the happiness and well-being of every one, why is it that its development is so utterly ignored in all our methods of education? Among the things which tend most to its improvement, a study of the beautiful in nature, art, and literature holds the first place. What can better perfect the teacher in his calling than a personal acquaintance with the inspired thinkers and singers of all time? The schoolmaster and the philosopher have spoken to small circles of pupils or disciples, and they and their words have been forgotten; but the poets have spoken

to humanity and to the world and to the circling ages, and they are immortal. They deal with universal nature, in all its varying aspects; and more than all else, they treat of man's life on earth and of God's ways with him.

The author of the Book of Job, Homer, Dante, Shakespeare, and Goethe are the world poets; there are none others like them. Each differs from the others in individual characteristics and in mental traits and inclinations. But all agree in teaching the same moral truths however various the garbs in which these truths are clothed. The fundamental principles of morality are embodied in the first two commandments of the decalogue, and with these the great poets everywhere agree. As moral teachers there is scarcely a single point in the code of right-doing which they do not touch upon. They teach not as philosophers or schoolmasters, they teach as Nature teaches; by appealing to our inner consciences they teach us to feel what we are and what we shall be.

How can we make these lessons of practical use in the school-room? If these poets were living now would you ask such a question? Would you not rather saturate your minds with their wisdom, which would inspire you with power afterward to be felt in the school-room? The best of all they ever wrote still lives and is accessible to you. Did they write with a moral purpose and from an intention to teach ethical truths? I think not. The Book of Job is a work of inspiration, and no doubt Homer, Dante, Goethe and Shakespeare wrote from inspiration. Not by heart do the poets sing, but by Divine power. God is the speaker and through them He is conversing with us. Is not this the lesson God intended to teach us when by the mouth of the best of poets He sang the best songs?

The subject was continued in a brief paper by J. R. Starkey, of Martinsville, who said:

"It is not an easy thing to estimate the value of the influence of any individual. Each one contributes something to constitute that complex product called civilization. From remote ages there come to us streams of thought that have much to do in determining the character of the civilization of the present. It is not to Dante, Shakespeare and Goethe that we are to look for originality in morals. Each of these drew his inspiration from sources external to himself. But because we do not attribute originality to these men, they are not to be regarded as of little importance. Each has wielded an influence that has largely determined the character of the civilization of to-day. Dante, Goethe and Shakespeare all teach the same necessity of practicing virtue and shunning vice, but as to the motive power that shall control men in the exercise of various virtues, they are widely different. Dante finds in the future world the time of reward and punishment; Goethe finds in virtue that which brings its own reward; Shakespeare, the divinest of the three, unites the present and the future, allots to man on earth a portion of pleasure and pain, as reward or punishment, and points to the future for the fullness of that reward unequally apportioned in the present."

Mr. Smith, of Lafayette, would emphasize the question as to whether the poets themselves are living examples of the moral lessons which they teach? It is very curious to notice in connection with the lives of many of the great poets that as men they are one thing and as poets an entirely different thing. It seems that the poetic genius, the Good Spirit, which sometimes exercises dominant control over them, does

not benefit them, does not purify their nature. It is sometimes better for us in the study of literature to let the lives of the poets alone and deal with their works; lay aside the individuals and take the divine spirit which possessed them.

T. N. James, of Brazil, would bring the subject a little nearer to modern times. We go to the past too much to get our examples. I believe in teaching by example as well as precept. I believe it is better to take some one who is a living example himself. Are there not poems produced in modern times which have a moral influence equal to those of the past? The Greeks were taught to obey their parents, to honor Homer and to study his works. So in Italy with Dante, and in Germany with Goethe. I believe that not one-half of the teachers have read those works, and I believe we ought to do the best we can with the materials we have. If we can not have much of Shakespeare, let us have a good deal of Bryant. I believe that Americans are better by studying such men as Longfellow, Whittier and Lowell and Bryant, and more patriotic for such songs as the "Star-Spangled Banner," "Marching through Georgia," etc. These have an influence upon the children that you can not bring about by the formal teaching of morals or anything of the kind.

The President then read the following telegram:

COLORADO SPRINGS, COL., Dec. 29, 1886.

To President Indiana State Teachers' Association:

The teachers of the Centennial State reach down the right hand of fellowship.
H. F. WEGENER, President.

The President was instructed by the Association to send a telegram in response, also to send greeting to the sister States of Michigan and Illinois, now in session, and to the Association of New Mexico, now holding its first meeting.

A paper was then read by Prof. Arnold Tompkins, of the Normal Department De Pauw University, on

"THE ERROR OF THE WORK IN THE LOWER GRADES."

The error in school work most generally is a violation of the fundamental principle of teaching, which is that it is the process of affecting mind by means of ideas or by means of subject-matter. The science and art of teaching is the science and art of carrying on this process. The error is in the ineffectual use of ideas to educational ends. The idea is not made to do for the mind what it is adapted to do. The teacher who can put himself into the mental process of the child, and who uses the means at his hand with the fullest effect to shape the life and destiny of the child is the true artist. In spite of the deep-throated eloquence over our large school funds and a formula for a system of schools it remains to be shown that we make better use of ideas to educational ends. The school may be perfect in all its attainments, pupils organized into a beautiful system, course of study perfect, and yet the school be a very sorry affair, because there is failure where failure is fatal. Let the teaching act be perfect, with all that this implies, and every error vanishes.

S. E. Miller, Supt. of Michigan City schools, thought that the inability on the part of the teacher to gain the attention of the pupils is

the root of all the errors combined. The historian, the poet, the orator or the writer of any kind of literature depends for his success upon gaining and holding the attention of his readers or hearers, and his works have no interest unless he has that power. Among the hindrances we might mention the teacher's natural inaptitude. Teachers, like poets, are born, not made, and no amount of training will make up for natural want of ability or tact. All the efforts of a teacher to prepare for the work is time and money thrown away because Nature has not endowed that one with the ability to hold the attention of the children. The teacher's lack of enthusiasm is another source of error. The stereotyped ways of teachers, the results of following school directions and recipes, and the teacher's indifference to results are sources of error. We are apt to hear now-a-days this direction: "Learn to do by doing." All well and good if the doing is in the right way. But doing alone is not sufficient; concentration of the entire attention must be secured. Two remedies are, to assign a smaller number of pupils to each teacher. The teacher in order to secure attention must be interested and give his whole attention to the subject.

George F. Bass, Supervising Principal in the Indianapolis schools, continued the discussion, giving some of the errors in his own teaching, and the manner of their correction.

Lewis H. Jones, Supt. of the Indianapolis schools, also took part in the discussion.

"Scientific Temperance Instruction" was to have been discussed next, but Mrs. J. R. Nichols, who was to present it, was unavoidably absent, and the topic was passed over, and the

REPORT OF THE COMMITTEE ON THE OFFICE OF TOWNSHIP TRUSTEE

was heard. The report was quite lengthy and was read by E. A. Bryan, President of Vincennes University, chairman of the committee. It contained much statistical matter, and the many and the growing evils of the system were pointed out. The conclusions reached by the committee pertaining to the defects were summarized as follows:

(1) Danger of the embezzlement of township funds; (2) danger of frauds in the purchase of furniture, apparatus and supplies, and in the expenditure of township funds; (3) danger of wastefulness or penuriousness in furnishing the schools with supplies; (4) lack of wise and constant oversight of teachers; (5) lack of fearless discharge of duty in selecting teachers; (6) lack of strong, wise and fearless men to fill the office of trustee.

Following the report the committee submitted the following resolutions, which were almost unanimously adopted by the Association, after considerable discussion, Prof. John M. Bloss stating that the committee was supported in its views by both the retiring and incoming State Superintendents:

Resolved, That we hereby affirm our faith in the township system and our belief that it is the best thus far devised for the management of the district schools of the state.

Resolved, That the present plans of township organization, whereby the management of the school affairs of the township are placed in the hands of a single trustee, should be maintained.

Resolved, That the success of this system, as of any other, will depend largely on what the people make it, and will become more efficient as the people come to elect only honest and competent men to fill office.

Resolved, That the danger of the abuse of office may be lessened, and its administration rendered more effective by amending existing laws in the following respects: The term of office of trustee should be increased, and he should enter upon his duties on the first Monday of August. The powers of the county board of education should be increased, and all supplies should be purchased under its direction and control. Greater publicity should be given to the accounts of the trustee. The trustees should be held to a more faithful discharge of their duties in the matter of selecting teachers and overseeing the schools; and,

Whereas, The Superintendent of Public Instruction has made the following recommendations to the Legislature: (1) The term of office should be extended to four years. Half of the townships of each county should elect at one time and the other two years later. The trustee should be paid a fixed salary, proportioned to the amount of his labor and responsibility. (2) All school furniture, apparatus and supplies should be adopted and prescribed by the county board of education, and prices of the same fixed by said board in contract with dealers, and trustees should be prohibited from purchasing any furniture, apparatus and supplies other than those prescribed by the board and at prices agreed upon. (3) No order, or promise to pay, issued by a trustee, should be binding on the township, or possess any validity unless recorded within ten days of its date in a book kept at the office of the county auditor, and open to public inspection, and unless certified by the auditor as so recorded. (4) Trustees should be requested to publish an annual report of all receipts and expenditures of moneys. (5) The office of director should be abolished, and the trustee should be made responsible for the safe-keeping of the school-houses and property, with power to employ as janitor for each house a reliable person living in the neighborhood; and the trustee should be required to visit each of his schools at least twice every school year. Therefore,

Resolved, That we heartily endorse these recommendations, and urge their adoption by the Legislature.

AFTERNOON SESSION.—A. D. Mohler, Supt. Huntington county, presented a paper on

“EDUCATION AND THE LABOR PROBLEM.”

The labor problem is one that demands the especial attention of every teacher, for the thorough education of the masses is a leading factor in its solution. A thorough education teaches the true relations between labor and capital. A lamentable amount of ignorance exists on this one point. The laborer thinks himself the prey of the capitalist. A thorough education will correct these false ideas on the part of the laborer, and give the employer the idea of the rights of the employee. There can be no remedy for any wrong without intelligence to uproot it. The mind is the instrument by which man advances.

Our present application of our educational system is not sufficient for the needs of the masses, because it makes those who obtain the education of the schools discontented with manual labor. It tends to crowd the professions by throwing a false glamour about them and the teachers are in great measure to blame for this. They hold up the idea that if one is educated he need not work. Physical culture and moral ideas are degraded to elevate the mental being. The youth need hon-

est training. And as the hope of our country is in the hands of the workmen, they need that education that will lead them to act intelligently in public affairs, and not become the prey of demagogues. Labor must be dignified, not degraded. Our young people must be taught that it is as respectable to follow a trade as it is to follow a profession. The remedy must be sought in a revision of the curriculum of the schools. The teachers must go among the masses and study their needs. More attention must be paid to nature and less to dead languages. The individuality of the pupil must be recognized. The teacher must study labor problems; he must inculcate high moral ideas. The only safe solution of the problem lies in the general dissemination of education so that the capitalist and the laborer shall see that there is no need of antagonism between them. To adjust this education must be the work of the teacher.

The discussion of the subject was taken up by A. B. Woodford, instructor of Political Economy in Indiana University. On the main points of Mr. Mohler's address he differed from that gentleman. Said he: There is not only a need to simply trust the true relations of capital to labor, but the children need more education. In instilling into the minds of the children the proper moral sentiments will be found the true solution of the labor question. All education should tend in this direction. By thus increasing the efficiency of our system we will lessen the number of crimes and decrease the number of paupers of our land.

Michael Seiler, of the State Normal School, continued the discussion. The workmen, said he, have a grievance, but they do not know what it is. The mere statement that they have a grievance is all they can give—It is not easy to define that grievance, though I am satisfied they have one. It is a disease, and the difficulty is in describing it. The leading query is this, "How shall labor secure a more equitable share of the wealth of the country? Not far from one-fourth of the wealth of the country is controlled by a small privileged class. We have men so rich that they can erect residences that cost as much as our magnificent State House, and never feel the expenditure; and we have them so poor that existence is a continual struggle to them. It is true the ignorant and indolent tend to be poor, but among the poor are millions who are not ignorant, indolent and degraded; and this is a land that produces a greater surplus than any other country upon the globe. Education touches the labor problem, only so far as it touches public opinion. There are many causes that have served to bring on our labor difficulties. The use of public money in national elections is one. Our statesmen even sell their vote for a United States Senator. Our Legislature is controlled by money. The makers of our laws too often consult boodle, and not the will of the people. The people have in a measure come to believe that this is right, and public sentiment applauds the man with the most boodle.

This state of affairs is not chargeable to the public schools. It is not what the schools are doing, but what they are not doing. We need more teachers who instill into their pupils the true tenets of religion. The man who is educated is conscious of power. If he does not feel the power he is not educated. It is not, therefore, strange that education tends to take men from manual labor. Higher wages are paid for brain work than for work with the hands. A farm hand is paid but \$250 a year, while a book-keeper gets not less than \$1000. The farmer

needs more education, and when all the people are educated, as they should be, the labor question will offer its own solution.

In the general discussion which followed Prof. L. S. Thompson, of Purdue University, said:

I do not agree with the author of the paper, in that the schools are responsible for the sentiment that labor is degrading. The schools are what society wants them. I have never heard in any school or by any teacher that it is degrading to do manual labor. I claim that there is no inherent dignity in manual labor; it is nothing more than the exercise of force. Whatever dignity there is in manual labor comes from the spirit in which it is done, and from the purpose one has in view. If you want to elevate labor you must do it by putting more thought into it. It is the beginning of knowledge to know that we can do something better.

R. G. Boone, Chair of Pedagogy in Indiana University, presented the Report of the Board of Directors of

THE INDIANA TEACHERS' READING CIRCLE.

Besides setting forth what had been done by the Reading Circle during the year closed, the paper elaborated the aims and workings of the organization, and the estimated advantage to teachers and schools from the general adoption of the Reading Circle course. Every enterprise looking to the bettering of the schools must more or less regard the teacher. After the children themselves, *he* is the initial factor in all school culture. The teacher, largely in matter, chiefly in method, almost solely in inspiration, is the measure of the school. But the non-professional class is the majority school influence of half a million Indiana school children. It gives character to the ungraded schools of seventy-five counties. Of the 13,000 teachers it is estimated that not more than one-fourth to one-third have even a partial professional preparation for their work.

Out of this condition of school affairs come certain suggestions whose appreciation will render more clear the demand for the Reading Circle enterprise. The few professionally prepared teachers, either from schools of repute or from well-directed private study, suggests the need for well-chosen reading, intelligently done in the line of professional literature. Teachers should be authority in matters educational. Then again, the narrowness of culture incident to one whose scholarship and whose thinking and reading are chiefly in the line of his business, suggests the need of some inducements to general culture. Hence the general culture line of the teachers' course. It may be fairly anticipated then, that as a result of following this or some similar course,—

1. The non-professional class will grow relatively smaller.
2. The average length of service will be augmented.
3. The standard of the teachers' necessary culture will be vastly elevated.
4. The aspect of teaching will show a change from that of a business to one professional.

Concerning the present condition of the Circle reports are in from 28 counties, showing 645 members paid up, while about 3000 teachers are reading, most of whom are prospective members. The course is largely pedagogical, because it is prepared for teachers. The wisdom of which phase is shown by the fact that most other states organized since are adopting the Indiana organization. It was suggested that

Reading Circle Department be maintained in the School Journal, and that county managers, city superintendents and institute instructors might largely aid in making the Circle even more successful than it has been.

E. R. Smith, of La Fayette, in the absence of W. W. Parsons, led in the discussion of the report.

He would emphasize the fact that the managers of the Reading Circle have done all that is possible for them to do. It remains for those who are not managers to make a success of the work. If the anticipation be realized that the non-professional class will grow smaller and the length of service of the teacher be augmented, and the work of the teacher become more of a profession than a business, this work should be continued with more vigor than has characterized it during the past year.

W. A. Bell in a brief speech moved the adoption of the report, which was done.

The report of the committee on nomination of members of the Reading Circle Board was then presented as follows:

D. W. Geeting, Indianapolis, to serve three years; C. W. Hodgin, Richmond, four years; L. H. Jones, Indianapolis, one year; W. H. Elson, Rockville, four years. The committee also recommended that the State Superintendent be *ex-officio* a member of the Board of Directors. Adopted.

W. H. Elson then presented the "Report of the Committee on County Superintendency," as follows:

Your committee to which was referred the question of the advisability of securing legislative action looking toward an educational qualification for county superintendents, begs leave to report that in its judgment it is due to the half-million children in the public schools of Indiana, it is due to the 13,000 teachers in those schools, it is due to the office itself that such qualification be required.

Your committee further begs to submit that in its opinion said standard qualification should be equivalent to the present standard required for a "professional license."

This report was unanimously adopted.

The following telegram was received;

SPRINGFIELD, ILL., Dec. 29, 1886.

Illinois to Indiana, Greeting:

We expect to see you all next summer.

CHAS. Q. PARKER, Pres.

The appointment of a Committee on Nomination of Officers was next in order.

M. Seiler offered a resolution abolishing the old method of selecting a committee composed of one person from each congressional district, and moved that the Association select a committee of five, whose duty it should be to nominate the officers. He suggested an amendment to the constitution providing for this change. The purpose of the resolution was to prevent "setting up things" so as to control the election of officers.

W. A. Bell moved that this resolution lie upon the table for one year. The motion was adopted.

W. H. Elson expressed himself as being ignorant of the constitution of the Association.

On motion of Hiram Hadley the Editor of the School Journal was requested to publish the constitution so that members may be made acquainted with it.

A committee of three was appointed to revise the constitution and bring it up for discussion next year. M. Seiler, Mrs. Byers, and (Sec. failed to get the other name), were appointed on this committee.

W. A. Bell moved that it is the sense of this Association that its next President should be a woman. After some discussion this was adopted.

The following Committee on Nomination of Officers was appointed: First District, Robert Spear, Evansville; 2d, F. P. Smith, Bedford; 3d, W. S. Almond, North Vernon; 4th, H. B. Hill, Aurora; 5th, S. E. Harwood, Spencer; 6th, D. E. Hunter, Connersville; 7th, W. B. Flick, Indianapolis; 8th, L. H. Hadley, Rockville; 9th, E. R. Smith, Chauncey; 10th, G. R. Voorhees, Crown Point; 11th, H. G. Gunder, North Manchester; 12th, T. J. Sanders, Butler; 13th, E. M. Chaplin, Warsaw.

EVENING SESSION.—Mrs. Mattie Curl Dennis, on behalf of a Joint Committee composed of members of the Executive Committee and of the Reading Circle Board, presented a memorial on the death of Mrs. R. A. Moffitt.

MEMORIAL.

There are events, in the dispensations of life, in the presence of which we feel that there is no resource but acceptance. One of these events is that of death; and especially is this true when death takes from our presence one for whom we feel strong sympathy and profound appreciation; and this is eminently true in the death of Mrs. Moffitt. In her death we feel that our profession has lost one of its most self-sacrificing and earnest workers, this Association one of its most efficient members, society one of its brightest ornaments, and her children a devoted mother.

Believing these things, we, as an Association, feel that it is due her life and memory that we should express our high appreciation of her worth and our sadness at her loss. There are lives whose silent endurance makes them grand; whose patient persistence adds a fresh impetus to human endeavor; whose enthusiasm lends a charm to all the nobler aspirations of manhood and womanhood. Such a life was Mrs. Moffitt's. Placed under circumstances that would have crushed a weaker nature and have exterminated the better impulses in an ordinary mortal, she gathered from *all these* untoward circumstances the elements of success and the achievements of victory.

Struggling onward and upward she was never content with present achievement, but continually sought to increase her power for doing good. Strong in purpose and noble in aspiration, she was equal with him—

“Who breaks his birth's invidious bar
And grasps the skirts of happy chance,
And breasts the bow of circumstance
And grapples with his evil star.”

Ah, who can measure the good of such a life? Only He who can bind the sweet influences of the Pleiades.

"Do we call that star lost that is hidden
In the quiet light of morn?
Or fashion a shroud for the young child
On the day it is born?
Yet behold these were wise to *their* folly
Who mourn, sore distressed,
When a soul that has labored believing
Returns to its rest.
And than *her* never *any* more sweetly
Went to rest true and deep
Since the first of our Lord's blessed children
Having prayed, fell asleep."

On motion, the memorial report was adopted and ordered spread upon the minutes and a copy sent to each of Mrs. Moffitt's daughters.

Geo. Howland, Supt. of the Chicago schools, delivered the annual address, the subject of which was

"CHARACTER IN THE SCHOOL."

Differ as we may in many matters, we all agree in the fact that the one great end of school life is the formation of character; we differ only as to the ways and means employed to secure this end. The school at best, can give but a beginning to the best scholarship. It is a pity that during all our school life our pupils can have no physical education. Hand in hand with intellectual life should be moral development. The influence of the teacher does not begin or end in the school room; it penetrates the very home of the pupils. The children should early be taught to think. Thought must be consecutive if it is educative. The pupils should be placed, as far as possible, upon their own responsibility. They are not given enough room for plans of their own.

On motion, a vote of thanks was tendered to the speaker for his excellent address.

The following telegrams were read by the President:

SANTA FE, N. M., Dec. 30, 1886.

New Mexico Education Association in its first session returns heartiest greetings.

R. M. D. BRYAN, Pres.

LANSING, MICH., Dec. 29, 1886.

The Michigan State Teachers' Association return greeting. Meet us at National Association.

GEORGE BARNES, Sec'y.

THURSDAY MORNING, Dec. 30.

The exercises of the day were opened with prayer by Hon. B. C. Hobbs.

D. W. Dennis, Prof. Nat. Science Earlham College, addressed the Association on the subject,

"PHYSICS IN THE ELEMENTARY SCHOOLS."

The speaker said that he graduated from the public district schools. Subsequently he had taught two years in those schools, two years in a graded township school, and four years in a city high school. He spoke of the schools as he knew them then. If the schools are differ-

ent now from those that he had known it was because they had passed into other hands. As he had known them they did not point sufficiently to something higher than themselves. It is the duty of the district school to lead to the high school, the high school to the college, and the college to the university, and the University to further usefulness. The elementary schools ought to inspire the student with a love for that which is higher. As he had known them, the schools recited from the book; it was the court of final appeal in all matters: used by the teacher to vanquish the pupils, and by the pupils to vanquish the teacher. In those days the schools had too many studies, but he did not think the students studied too much. The teaching was not according to natural methods. If we would teach a child language in the same way that he acquires the use of language we should get much better results. It is not right that a boy between twelve and fourteen years of age should be more worried about examination than the average man is about the decision of the final judgment. He was not about to recommend the introduction of another study into the schools. If we teach a boy natural science from the book we are adding one more study, but not getting any more study from the boy. We make a mistake in teaching principles when we ought to be teaching incidents. One incident is worth a thousand principles.

He had been teaching Physics experimentally and making the experiments himself. He then introduced a dozen or more simple experiments which may be made with apparatus which costs little or nothing and which may be performed by any one. These will interest the students and lead them on to make further investigations for themselves.

The subject was continued in the "Discussion of Circular No. 7, 1884," by H. A. Huston, Chair of Physics, Purdue University. He favored the idea of cheap apparatus, saying:

One of the leading ideas of the new physics is that students shall do experimental work; hence the demand for cheap apparatus. But a no less important idea is that one accurate, quantitative experiment, repeated often enough to diminish accidental errors, is worth, both for reliable information and discipline, a multitude of rough qualitative experiments not involving measurements. Accurate measurements involve first-class instruments. Advocates of cheap apparatus state that the more expensive forms daze and confuse the student. But my own experience is that most of the confusion is due to poor instruction rather than to good instruments.

The report of the committee on the

"CULTURE OF THE ÆSTHETIC ELEMENT IN CHILD NATURE"

was presented by Mrs. Emma Mont. McRae, Principal of the Marion high school.

The report emphasized the value of an appreciation of the beautiful, which, said she, is a revelation of the Divine. The true antidote to the cultivation of false taste is, not to reject as barbaric all that does not harmonize with the lofty ideal of beauty, but rather to recognize all attempts at the expression of the æsthetic nature as hopeful means toward growth.

In the general discussion of the subject Mrs. Dennis, of Richmond, said: This is a subject in which I am so much interested that I must

be heard upon it. I want to say one thing further to emphasize the paper. I believe that if the teacher will go into the school-room with a true inspiration for the work and with a love for little children, will teach them to become unselfish, the children will have æsthetic culture. I believe in pictures, poetry and music; but I believe it is a greater thing than that to teach the children, as Emerson says, "It is better to die than to lie." I believe if we can succeed in getting the children to understand the beauty of being kind to one another, of being self-sacrificing, of being truthful at all times, and willing to help some one else instead of helping themselves—if this spirit can be instilled into the little children they will have æsthetic culture.

"SUGGESTIONS ON LEGISLATION AND ADMINISTRATION OF INDIANA
SCHOOL SYSTEM,"

by Ex-State Supts. B. C. Hobbs, J. H. Smart, John M. Bloss, and J. W. Holcombe, was the next exercise on the program.

Mr. Smart said that he believed the school system of Indiana to be one of the best in the country. It is so acknowledged by leading educational men. The committee had but few recommendations to offer. They thought, however, that all the various departments of school work should be represented in the State Board of Education. We have the higher institutions represented in that board, and it was thought that those who manage the district schools should also have a representative. The committee would recommend a change in the law by which one or two or three County Superintendents shall become members of the State Board.

Mr. Bloss agreed with Mr. Smart in the statement that we need but little legislation concerning the revision of the school law. He would suggest, however:—

1. That the law should be so modified or extended that the Supt. of Public Instruction should be required to thoroughly audit the financial reports coming to him. The auditor of each county is required to make a report to the Supt. of Public Instruction setting forth the amount of money paid to trustees during the year; superintendents are required to make a report to trustees and to make a report to the Supt. of Public Instruction of the facts reported to trustee. These reports go to the Auditor of State. They ought to exactly coincide, but they do not. The law should compel the State Superintendent not only to audit these reports, but to compel their correction. And the trustee of every corporation should report the indebtedness as well as the amount of money on hand. The Supt. of Public Instruction does not get all these facts.

2. In 1882 the Legislature provided that the annual reports to trustees should all be made at the same time. He would recommend that the trustee should take his office at the time of making the annual report. As it is the trustee makes a report of nine months of his predecessor's work, and the three months of the period in which he has been in office. He would have the trustee take his office at the time at which the annual report is made by his predecessor, so that he shall make a report only for the period of his own administration.

3. He would insist upon greater publicity of the trustees' reports. The trustee should be made to print an itemized account of his expenditures. This would secure a better class of men for the office, and there will be a more judicious expenditure of the school funds.

Mr. Holcombe said that the committee had not been able to interview each other fully, but he agreed heartily with the others in the suggestions they presented. He then read extracts from his forthcoming report, also from the reports of Supts. Smart and Bloss. He said that the State Association had exercised strong influence in bringing about useful legislation. It can bring these matters before the Legislature to show that body that we have some thoughts upon this subject. He moved that a committee of seven be appointed to consider these recommendations and to memorialize the General Assembly on the subject of school legislation.

The following named persons were appointed on this committee: John M. Bloss, R. I. Hamilton, W. A. Bell, H. D. Voris, A. M. Sweeney, D. M. Nelson, W. H. Sims.

On motion of Mr. Hadley, the Association voted an appropriation of \$25 to pay for the expenses of the printing of the report made yesterday, and for the printing and disseminating other matters for the use of this committee.

Miss Laura Donnan, of Indianapolis high school, read a paper on

"THE NECESSITY OF POLITICAL EDUCATION."

♦ Miss Donnan, among other things, said: The continental Congress of 1787 adopted a bill (with reference to the territory northwest of the Ohio) providing schools for the extension of the fundamental principles of civil and religious liberty. In the five states that constituted the original northwest territory there are 46,465 schools. With 46,465 schools and the constitution a legally required subject in only one-ninth of them, can the schools of the great northwest be said to fix and establish the fundamental principles of civil liberty! Of the 9,414 schools in Indiana only 6,000 teach United States history and 4,000 the constitution of the United States. Three children out of seven only are taught United States history, and one out of seven civil government (allowing the most liberal estimate). No commissioned high school in Indiana is required by law to have civil government in its course of study. Out of 381 such schools, United States history is taught in only 76, and constitution in 45. In Indiana no examination in the constitution of the United States is required for admission to the State University, and no city, county, or state superintendent is required to know anything about the constitution. No mention is made in the state school law of the federal constitution, and yet Indiana is one of the states in which schools are established to extend and fix the fundamental principles of civil liberty.

In order to find out the average intelligence of criminals, each prisoner in the Indianapolis work-house (48 in number at the time), was asked certain questions. Five only were native citizens; of these one had read the constitution, one the Declaration of Independence, and one Washington's farewell address. Of seventy-five male paupers in the Marion county poor-house, fourteen claimed to have read the constitution, seventeen the declaration, and sixteen the address. Every male pauper and criminal, it must be remembered, has at some time been a citizen with franchises.

Is it more important to the young American that he should know the venous circulation of the blood than to know that every just or unjust deed of even the humblest citizen of this republic never ceases to circulate? Surely if this opinion had prevailed in 1775 the "embattled

farmers" who "stood and fired the shot heard round the world" would never have been heard from.

A nation's pulse-glass is its largest cities. Of fifteen school superintendents in such cities who answered questions, eight expressed the opinion that too little time is given to these important objects, three thought the time sufficient, but the teaching insufficient, and four expressed complete satisfaction, both as to quantity of time and quality of work. Strange to say, one of these four cities has for years been the hot-bed for strikes, and in another, only a few months ago, the character of the citizens had sunk so low that the star-spangled banner blushed scarlet in shame.

When the population of this country is 60,000,000; the foreign immigration for the year 334,203; the number of illiterates ten years of age and over 4,923,451; the school population 17,000,000, and the average attendance only 6,000,000; when to only 1,000,000 instruction in the constitution is secured by law; and when shelves in our libraries are filled with volumes of our own political history unread because "the people are not educated up to it," there is certainly need of political education.

Shall the public schools of Indiana do their duty in this work of political education? The responsibility rests with this Association. It is a notable fact that scarcely a school law has been passed in the last thirty years but has first been discussed, recommended and pushed by this body.

AFTERNOON SESSION.—The first exercise of the afternoon was a discussion of Miss Donnan's paper by S. S. Parr.

He wished to reinforce one point in the most excellent paper. That is that the paupers in our poor-houses have sometimes voted in the past. That wants to be put much more strongly. They are voted now, and at times when their vote is extremely hurtful. They are brought out when the vote is close and when some body needs so many votes to carry his point. It may be that is a matter of law rather than education. But it is a matter of importance to educate the people up until they will not bear any such thing as that. We are yet a young nation and have the faults of a young people. A hundred years in the existence of a nation is a mere beginning as it were in its life. We have an exuberance of hope and believe that whatever is best. He for one did not see the roseate view of our country we hear of in our Fourth of July orations, and sometimes thought there were gloomy things for us ahead. The condition of government suitable for a country of a few millions, where the conflict between classes and individuals is small, will not answer when we have a dense population of two hundred millions of people. Some will say "sufficient unto the day is the evil thereof." But it is the part of wisdom to look not only to the present but also to the future. We know the evils of the present and most of them are the evils of ignorance with regard to the duties of citizenship. The organizations for the dissemination of this knowledge are the Institute of Civics and Civil Service Reform Association, but in the schools is the focal point for this instruction.

The annual address was delivered by E. C. Hewett, President of the Illinois Normal School on the subject,—

"IN MY MIND'S EYE, HORATIO."

[The secretary made a very full report of this address, which will be published in a future issue of the Journal.—ED.]

At the close of Dr. Hewitt's address, miscellaneous business was in order. A letter from T. J. Charlton, Supt. of the Indiana Reform School, was received, inviting the members of the Association to visit the school to-morrow, stating that he had secured free transportation for all who would accept.

L. H. Jones, chairman of the Committee on Resolutions, submitted the following report, which after some discussion was adopted:

Resolved, That we view with favor the movement now being made in several European countries, and especially by Von Molkenborg and his associates in Germany, to give to the science of teaching an international character—to take it out of the narrow grooves of philosophical sectarianism and national prejudice, and to place it on the solid system of national principles—and that to this end we indorse the attempt now being made to establish a national educational journal, to be devoted to those phases of educational work which are, or ought to be, the same in all civilized countries.

WHEREAS, We believe that general intelligence and morality generally diffused among the people are essential to the popularity of a free government; and whereas, experience has shown that the school is one of the most capable of the institutions created and sustained by society for the diffusion of intelligence and morality necessary to a free government; and whereas, the Congress of the United States has for some years had under consideration the subject of national aid to education, especially in those states where the most alarming ratio of illiteracy exists; therefore, be it

Resolved, That we take this opportunity to reaffirm our indorsement of the measure now before Congress known as the Blair Educational Bill, and express the hope that favorable action may soon be taken on the bill.

WHEREAS, It is a self-evident principle that every distinct department or phase of the school work of the state should have fair representation on every board, or constituted authority which regulates, controls or directs the work of such department; and whereas, by the present constitution of the State Board of Education the country schools of the state have no such representation; and whereas, the State Board of Education has formed a resolution recommending that the Legislature of Indiana so amend the law constituting that board as to include three county superintendents among its members;

Resolved, That we heartily indorse such resolution, thus recommending direct representation of the country schools on the State Board of Education.

BELIEVING, That one of the greatest evils of the present generation is the prevalence of the use of stimulants and narcotics, and believing it the duty of the public schools to assist in the suppression of this evil by a more thorough education on such subjects;

Resolved, That we express our hearty concurrence in all the efforts to secure, by state legislation, instruction in all public schools of the state, in Physiology and Hygiene, with special reference to the nature of alcohol and other stimulants and narcotics and their effects upon the human system.

Mr. E. E. Griffith, Superintendent of Frankfort schools, offered the following:

Resolved, That the Association favors the merit or competitive system, as suggested by Miss Martin, in selecting the papers which are to be presented for its consideration.

Resolved, That we recommend this system to the careful consideration of the various committees having in charge the programs of the next session; leaving to the committees such details and methods of selecting as seem to them best.

Mr. Hadley then presented the report of the Auditing Committee:

Your committee respectfully report: We have examined the accounts of the treasurer, but as a portion of the vouchers were not at hand we did not examine any vouchers. We are satisfied that the accounts are correct, but we are not entirely satisfied with the manner of keeping the accounts of the Association. Until within four years past no memorandum of any kind has been kept by which the treasurer or any one else can tell what members have paid their annual dues and what ones have not paid; and within these four years these accounts have been kept in fragmentary form.

Your committee propose the purchase of a book prepared specially for the keeping of these accounts, so constructed as to show at a glance the account of each member for a period of twenty years or more, and that the memorandum accounts now in existence be transferred to this book. Whilst we have no doubt of the accuracy of the treasurer's accounts, we think that the accounts of the State Teachers' Association should be kept in a neater and more business-like manner.

We also suggest that no moneys be paid except on the written order of the executive committee, which order shall be kept by the treasurer and shall accompany his vouchers. We also suggest that the accounts of the treasurer be audited annually.

On motion, this report was adopted, and the committee continued to act with the permanent secretary in inaugurating the above recommendations.

D. E. Hunter submitted the report of the Committee on Nominations, as follows:

President—Mrs. Emma Mont. McRae, Marion.

Vice Presidents—S. E. Miller, Michigan City; W. Mushlitz, Evansville; J. S. Gamble, Connersville; J. A. Zeller, Lafayette; Miss Nannie C. Love, Muncie; Miss Agnes Rankin, Indianapolis; Mrs. A. E. Mowrer, North Manchester.

Recording Secretary—Mrs. Annie E. H. Lemon, Spencer.

Executive Committee—Geo. F. Bass, chairman, Indianapolis; Miss Ellen Strader, Bloomington; Miss Louise Severin, Aurora; W. H. Ernst, Bluffton; M. Seiler, Terre Haute.

TREASURER'S REPORT.

D. E. Hunter, Treasurer, in account with I. S. T. Assoc'n,	<i>Dr.</i>
Dec. 1, 1886—To cash on hand.....	\$65 78
“ 30, “ To cash from members	212 75
“ “ “ To cash from Grand Hotel	50 00
	<hr/>
	\$327 53

Contra.

Dec. 27, 1886—	Locks for Casket	75
"	Signs for Per. and R. R. Secretaries.....	75
"	Expressage	70
"	Exchange and Postage.....	24
30	Grand Hotel for Hewett and Howland, V'r 1	\$10 00
"	Geo. Howland, expenses.....	" 2 11 00
"	E. C. Hewett.....	" 3 15 00
"	J. H. Henry, Exp. C. & V. Sec.....	" 4 3 25
"	C. W. Hodgkin, telegrams.....	" 5 3 50
"	Frank Smith, Stationery and Printing.....	" 6 7 25
"	Oscar C. McCulloch, for Church.....	" 7 60 00
"	W. H. Sims, Exp. Ex. Committee.....	" 8 28 00
"	T. G. Alford, R. R. Secretary.....	" 9 17 70
"	Sam'l Lilly, Ass't Secretary.....	" 10 4 00
"	Mary K. Hunter, Ass't Perm. Sec'y.....	" 11 4 00
"	J. R. Hart, " " " ".....	" 12 4 00
"	Annie E. H. Lemon, Rec. Sec'y.....	" 13 12 00
"	D. E. Hunter, Permanent Sec'y.....	" 14 18 00
"	Scratch Book for Secretary.....	35
Am't.....		\$200 49
Cash on hand.....		127 04

\$327 53

Vouchers 1 to 14 approved by W. H. Sims, Ch'n Ex. Com.

D. E. HUNTER,
Per. Sec'y and Treas.

CONNERSVILLE, IND., Jan. 5, 1887.

The Association then adjourned to meet December 27, 1887.

ANNIE E. H. LEMON, *Secretary*. C. W. HODGIN, *President*.SAMUEL LILLY, *Assistant*.**COUNTRY AND VILLAGE SCHOOL SECTION.**

INDIANAPOLIS, IND., Dec. 28, 1886.

The Country and Village School Section of the State Teachers' Association met for the first time in Plymouth Church, at 9:30. The meeting was called to order by J. H. Henry, of Morgan county.

Supt. Houck, of Jay county, made some explanatory remarks, and closed by moving that Mr. Henry be made permanent chairman. Motion carried. F. D. Haimbaugh, Snpt. of Fulton county, was elected secretary.

The regular program was then taken up and opened by a paper on "Supplementary Reading," by R. M. Garrison, of Morgan county. Mr. Garrison treated the subject in an able manner, and urged in a forcible way the vast amount of good that can and must follow the intelligent perusal of the newspapers of the country. He would also call into requisition the many good books that can be found in the families of the districts. Lessons of morals and higher ideals he would have

the boys and girls learn from the many rich biographies with which the library should abound. School-room monotony can be broken by a judicious use of supplementary reading, and at the same time many valuable lessons and facts can thus be learned.

A discussion upon the paper then followed, in which E. E. Smith lead. An animating and general discussion by many members of the Association followed.

After a short rest the "Township Principal" came in for consideration. State Supt. Holcombe gave a short sketch of the origin and purpose of the township principal, dwelling upon the result that must follow. The workings of the system was shown by a number of those who have had some experience in dealing with the problem. The question was thoroughly discussed pro and con, the burden of the song being that we must educate the people to the point where they will welcome the township principal full fledged.

On motion, a committee on permanent organization was appointed. one from each congressional district.

Afternoon Session.—The Association met at 2 P. M. Mr. T. B. Felter being absent, the paper on "Is a Uniform Course of Study Possible and Desirable" was not given, but the subject was well discussed by A. C. Fleshman, who opened, followed by A. C. Stevens, Supt. Rogers of Hendricks county, and a number of those present. The Association was by no means a unit in reference to the worth and practical working of the plan.

"Township Institutes as a Means of Professional Improvement," by L. C. Chamberlain, of Jay county. The discussion of this paper waxed warm. Meeting adjourned at 4:10.

J. H. HENRY, *Chairman.*

F. D. HAIMBAUGH, *Sec'y.*

THE HIGH SCHOOL SECTION met Tuesday morning, Dec. 28, and held its largest and one of its most interesting and successful meetings. The program as printed in the December Journal was carried out with little variation. The secretary's report of the meeting has not reached the Journal office—hence the brevity of this report.

THE COLLEGE ASSOCIATION held this year its largest and one of its best meetings. All the leading colleges of the state were represented, and the interest was unusual. Dr. D. S. Jordan, of the State University, was president.

THE INDIANA SCIENTIFIC ASSOCIATION held its second annual meeting during Holiday week and was largely attended. In this association papers are voluntary—each person writing on some subject to which he has been giving special study. A committee appointed for the purpose examines these papers and determines which shall be read. About sixty papers were presented to this committee, and many of them were read. The meeting was a very interesting one.

THE SCHOOL ROOM.

[This Department is conducted by GEO. F. BASS, Supervising Prin. Indianapolis schools.]

SHORT NOTES.

INERTIA.

THREE, five, twelve; three, five, twelve, fourteen; three, five, twelve, fourteen, twenty; three, five, twelve, fourteen, twenty, twenty-nine, etc. And this is called addition.
Stop it.

BUSY WORK.

Do not give pupils something to do "just to keep them busy." They should be kept busy, but the busy work should mean something. Much of the "busy work" is on a par with a little device that a mother adopted to keep the baby quiet. She put molasses on its fingers, and then stuck some cotton on one hand. The cotton was picked off by the left hand but it stuck to it, then the right picked it from the left; then the left from the right; and so on.

THE ANSWER.

Because a pupil has "the answer" it does not follow that he understands how to solve the problem. Neither does it follow that the teacher is a good teacher because the pupil "stands high" in the examination. Too many schools are measured by the number of 100's they get in spelling and arithmetic.

GOOD TEACHING.

When a superintendent visits a school he should be able to decide whether good teaching is being done without waiting for the result shown by an examination.

HE TOLD HER.

Little Stuart has spent his first day at school. "What did you learn?" was his auntie's question.

"Didn't learn anything."

"Well, what did you do?"

"Didn't do anything. There was a woman wanted to know how to spell 'cat' and I told her."

The teacher, evidently, had not read this boy. He was too

far along for her. He was too big for her mould. Teachers may frequently underrate pupils. Begin where the pupil is and lead him on.

THE INDIVIDUAL OR THE WORLD?

The individual needs symmetrical development of all his powers; the world needs an individual developed in such a way as to perform its work. The symmetrically developed individual often finds himself out of harmony with the requirements of the world. Since the world is the superior force, the development of the individual must be suited to its demands or he will have no place in it. Is it the duty of the teacher to have regard to the need of the individual or to that of the world? Should he not rather consider each of these, giving more attention to the former in early education and to the latter in later? T. G. A.

"THEM SUMS."

In ye olden time before every teacher was called a professor, pupils studied arithmetic to get the answers to "them sums." When a pupil could not get the answer in the book, the teacher stopped all other business and tackled that "sum," and the answer had to come or else the pupil (called him a scholar then) would go home and say he "stalled the master." When the "sum" was done, it was sometimes copied into a book so as not to bother the master with it next winter.

Yes, we have quit that kind of business now. Yet, it sometimes seems that the prime object is to learn *how to do those problems* just for the sake of knowing how and being able to "pass." The teacher gives problems of a certain *kind* because he knows the examiner will ask for some of that kind. He seems to lose sight of the fact that we are teaching for *power* and that power depends on the *kind* of effort put on the problem. If we tell a pupil that whenever he has a problem in which we are to deduct the agent's commission and to expend the rest, that we find the amount he expends by dividing by $1 + \text{rate}$, and he remembers it, he is not gaining power to think.

No one who has once heartily and wholly laughed can be altogether irreclaimably depraved.—*Curlye*.

OPENING EXERCISE.

THE BEST BEAUTY.

I know a little fellow
Whose face is fair to see,
But still there's nothing pleasant
About that face to me.
For he's rude and cross and selfish
If he can't have his own way,
And he's always making trouble,
I've heard his mother say.

I know a little fellow
Whose face is plain to see,
But that we never think of,
So kind and brave is he.
He carries sunshine with him,
And everybody's glad
To hear the cherry whistle
Of the pleasant little lad.

You see it's not the features
That others judge us by,
But what we do, I tell you,
And that you can't deny.
The plainest face has beauty,
If its owner's kind and true,
And that's the kind of beauty,
My girl and boy, for you.

—*Golden Days.*

Will it spoil the above stanza to ask whether the first boy would have been 'called a pretty boy? Was he pretty? Why not? Was the second boy a pretty boy? "Pretty is as pretty does." When a teacher has the pupils to thoroughly understand some little selection like this, "What we do is what counts", goes further than a scolding and is more apt to make the pupil think of how he is acting.

THE PERSONAL PRONOUN.

[FOR THIRD READER PUPILS.]

PROBABLY more errors are made in the use of this part of speech than in any other except the verb. Yet it can be presented in so simple a way that even a third reader pupil can understand it. The learning of a set of rules will not prevent a person from making errors in the use of language. Bad language is "catching," and it can not be prevented by vaccinating with "false syntax." The pupil must use the proper form so often that it becomes a habit. The ear should become so accustomed

to hearing the proper form that the wrong one would grate on it as discord does on the ear of a musician.

The wrong written form should seem as much out of place as a long tail coat and a "plug hat" on a small boy.

Habit is formed by repetition. It *may* be a conscious process and it often is an *unconscious* process. Horace Mann says: "Habit is a cable; we weave a thread each day and at last we can not break it." When a habit of action has become fixed it is performed unconsciously. We may begin an act consciously and finally perform it unconsciously. A boy begins to learn to skate. He is busy. His will is active. He is trying to carry out certain directions. He is applying principles by an effort of the will. He is conscious of every act. He finally is able to perform all these acts without an effort of the will and unconsciously. He has learned to skate by skating, or trying to. Why not have him learn language in the same way?

There are some correct habits in the use of the pronoun that every one has. No one ever says "The teacher told *I* to erase the board"; but many will say "He told James and *I* to erase the board." The teacher should have the pupil see what this sentence means. Ask him whom the teacher told. He will say "He told James." "Yes, any one else?" "He told *me*." He sees his mistake. He must now determine not to make such mistakes. When he makes a similar mistake all the teacher needs to say is "told *I*." "I saw John and *he*." "Saw *he*," says the teacher. The pupil instantly replies, "*him*". "Let John and *I* go." "Let *I*." "No, no, *me*" "May Mary and *me* ride in the sleigh?" "Me ride?" "*I*," says the pupil. "Us boys are going to town." "Us are going?" "No, no, *we*."

Put sentences on the board leaving a blank for the pronoun, and have the pupils copy and fill the blank with the proper form. Do not present these or any other improper forms to the pupils. If these improper forms are placed on the board and left there, they become as deeply impressed on the pupil as the correct forms. Avoid "false syntax" for young pupils. G. F. B.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

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LANGUAGE WORK.

IN looking at and studying any subject our ideas in regard to it must necessarily be determined by the standpoint from which we view it. Two views may be and are taken of the aim of language work. Some teachers consider that we teach language for the sake of the language itself; others hold that the language alone, is secondary in importance, and that the *great aim* is to give the power to think. True, if the right plan is pursued, our final result would be *language* spoken correctly at all times and under all circumstances; but just the best way to obtain this result is the point. As the evolution of thought is the aim of all teaching, and as language is as necessary to thought as to its expression, it follows that children must be taught language during the whole school course. A once prevalent idea of language work trained the imitative powers, only. It meant years of dull mechanical drill on the part of the teacher and years of dull memorizing on the part of the pupils. The language work may be so presented as to train the thought as well as the other powers. It may give the pupil a good command of language and teach him to speak it correctly. Language work is divided into two stages. The first, is called the informal stage. It extends through the first three years of school and is called the informal stage because in it, the work is incidental and the lessons are not regular.

The first work of the teacher is to make the child think; to give him a proper medium of expression comes afterward. In the first stage, object lessons are used as a means of obtaining free oral expression of thought. Present the object to the child, have him think about it, and then tell freely what he thinks. In this stage the children are to tell their thoughts in single, separate sentences. It is true that when children enter school they have a great many thoughts, and are sometimes not lacking in ex-

pressions for them, but the teacher must lead them to see facts in new relations, and also in order to train the senses, lead them to discover the facts for themselves. Lessons in color, form, size, etc., form good subjects for this kind of work.

The children of uneducated parents encounter a great many difficulties in language work. Their expressions lack clearness, definiteness and proper construction. For this reason they must first be led to think, and then it will not be so very difficult to get them to express their thoughts properly. All errors must be corrected, all wrong forms kept from sight and hearing so far as possible, and right forms continually presented.

The first stage is the stage in which the pupils are so under the control of the thought that they are to a great measure unconscious of the means of expressing it. The written expression of a thought obtained from a sentence in the reader is a phase of this stage of language work. This requires some preparatory work in which the pupils are led to give the thoughts obtained from a sentence in original sentences. The nature of the work would be:—

1. To have the pupil ponder carefully the sentence in order to obtain all the thoughts directly or indirectly suggested by it.
2. To have the pupils close their books and express in original language the thoughts that the sentence suggests.

Have them to express their thoughts in as original language as possible, and if they fail to grasp all the thoughts suggested by the sentence, lead them to see these thoughts and to express them in original separate sentences. This preparatory work is followed by work in which the children are to express in writing the sentences which they give. The preparatory work is taken because the children are not able to grasp at a glance the thought contained in a sentence, or to express correctly the thought they possess.

ILLUSTRATION.

“Let us stand still and hear the men play as they pass.”

1. Require the pupils to ponder this sentence carefully in order to obtain all the thoughts which it suggests directly or indirectly.

Thoughts directly suggested: "Some men were making music." "The musicians were passing along the street." "The persons indicated by 'us' wished to hear the music." There were two or more persons.

Thoughts indirectly suggested: "The music might have been made by a brass band." "The music might have been made by some wandering minstrels." "There was a circus in town," etc. The sentence will suggest a great many thoughts to the pupils.

2. After the pupils have comprehended these thoughts, have them to write them on their slates in original, separate sentences.

3. Have them copy the sentences from the slate upon paper.

After the sentences have been carefully prepared, allow the children to open their books and compare their sentences with those in the book as to the thought and expression. Have the pupil make all of the corrections that are necessary, if he is able to; if not, the teacher will have to do this. This work is valuable on account of the power it gives pupils to interpret expression, and to express thought in correct language.

In the second stage the substitution work is one of the means that are used to accomplish, or to bring about the fulfillment of the inherent aim of language work. If we notice carefully the average student in his efforts to elaborate any point, we find that his greatest deficiency is the lack of a vocabulary of words sufficient to express his thoughts fluently. The cause of this is that his classification of words has been based upon form instead of upon use, and the substitution work has for its ultimate aim, the giving of the power to know when we have used words to correctly express our thoughts, to use a variety of words to express thought, and the *giving* of the power to judge our expressions as to appropriateness. The argument may be advanced, that a child does not need to have more than one expression at his command for his thought; but if he wishes to express the same thought more than once in a composition, there is a sameness about it that might be relieved if the child had more expressions at his command.

The steps in the substitution work are to first state the sentence clearly, e. g., "He boasted of his feats and compared them to

feats of ancient heroes." The second step is to have the pupil determine the exact meaning of the expression which is to be changed, both in and out of the sentence. We find the use of the second word, *feats*, in the sentence, to be the expression of the same object that is expressed by the first word, "*feats*," to name the object of which he boasted, and to name that with which he compared his own acts. We find the meaning of the word out of the sentence to be *act*, *accomplishment*, *exploit*, etc. The third step is to lead the pupil to make the substitution. In this case he will probably substitute the word *exploit*, which will relieve the sentence of its monotony and give the child the power to express the idea, *feat*, by another symbol. The fourth step is to lead the child to weigh the two expressions as to appropriateness.

Many sentences, such as, "The Queen sent her message to the *gentry*," and "Many poems of *Milton* have been preserved," can not be changed by expressions any more appropriate than the ones that are used; but the sole aim in changing them is to give variety of expression.

THE FIRST YEAR'S WORK IN NUMBER.

THE best training for the mind of the child before entering upon the study of Number, is a thorough course of lessons in Form. Some of the reasons for this plan are: In the lessons on form the child is led to observe accurately, to describe definitely, and his hand is taught to perform its work with exactness. The work of the first year then, may consist of:—

1. A preliminary or preparatory stage, in which it is the object to train the mind of the child by a series of lessons on form (number being incidental).

2. A secondary stage, in which it is the object to present some clear ideas of number.

The forms to be studied are:—

I. THE SOLIDS.

- a. The ball or sphere and hemisphere.
- b. The cube.

- c.* The cylinder.
- d.* The prism.
- e.* The cone.
- f.* The pyramid.
- g.* The spheroids and hemispheroids.

II. PLANE SURFACES.

- a.* The circle and its parts (semicircle and quadrant.)
- b.* The square.
- c.* The triangle.
- d.* The oblong.
- e.* The rhombus.

The solids named should be placed before the child (one at a time, of course), and he should be led to examine them carefully. He should see all that can be seen in the one before him. He should handle it, roll it, push it. When he has discovered something let him describe it as well as he can. When he hesitates for want of a term supply it. He will need a name for the form in order to describe it fully, and the correct name should be given him. The observing child will readily find forms which resemble the one studied; the unobserving child will need encouragement to do the same. Send him out to the gravel walk to look for stones with curved surfaces, send him to his mother's work basket and cellar for spheres, tell him to stop at the carpenter shop for prisms, ask him to bring a cylinder from the granium bed.

When two forms have been studied, ask how they are alike, how unlike, how change one to make it resemble the other? When the form is drawn upon the slate or board it should be simply the outline as it appears from a distance. In molding the form in clay the work should be more exact, the plane surfaces should be quite smooth, the edges sharp. The work should be performed largely with the fingers rather than with the palms of the hands, since the sense of touch is much more acute in the fingers.

To recapitulate:—In studying any solid we may,—

1. Examine.
2. Describe.
3. Name.
4. Find forms like it.
5. Compare and contrast it with other forms.
6. Draw.
7. Mold.

In describing the *ball* the child may say:—The ball has a curved surface. It will stand. It will roll every way.

Like forms are:—A drop of water, a snow-flake, an orange, an apple, a cherry, a button, a bubble, a marble, peas, a lamp-globe, seed-pod of the balloon-vine, the eye, the head, etc., etc.

Forms resembling the hemisphere:—A sparrow's nest, a seal's house, an Esquimaux house, half an orange, half a marble, etc.

The cube will stand and slide. It has eight corners, six flat surfaces, twelve edges. The sides are squares. Sugar is sometimes cut in cubes. A house without the roof, a child's building block, a tea-box, a caramel, are like a cube.

The ball likes to roll: the cube likes to stand.

The ball has one surface: the cube has six.

The cylinder has two flat surfaces, one curved surface, two curved edges. The cylinder will roll, and stand, and slide. Its flat surfaces are circles.

Like forms:—The trunk of a tree, the fingers, a telegraph wire, a stove-pipe, a picture-cord, a pencil, a drum, a stick of candy, a slice of tomato, a cheese, the leg of a table, the stem of a leaf, etc.

The statements given above, the comparisons and the forms suggested are those given by children in their study of the forms. In molding, the models should first be represented as exactly as possible, then natural objects resembling them may be imitated. The home of a field-mouse is a sphere, a plum is a spheroid.

MRS. F. S. BURT.

THE MAP AS A MEANS IN GEOGRAPHY.

I. WHEN SHOULD THE *idea* OF THE MAP BE PRESENTED?

If the map were an essential part of the subject-matter of geography it might be assigned its logical place in the system of the subject. But as it is only an aid in presenting the subject, the time of its introduction can only be determined by the demand which it is to supply. It is an invaluable means in assisting the imagination to fix the position, general features, etc., of the natural and political divisions of the earth, as well as an aid

to the memory in recalling the same. Its worth can not be over-estimated for testing the pupil's conception of the part of the earth studied, as to accuracy.

The map is a symbol or a form used to suggest something, and therefore should not at first be presented before the thing which it is to symbolize. The general answer, then, to the question is, teach it whenever you teach the structural conception of the earth as a whole or any part of it. To answer the question specifically implies a description of the primary course of training in geography, upon which different opinions are held. If we pursue the method commonly known as the synthetic, beginning with the pupil's home, proceeding then to the county, state, etc., then it should be taught the first year of his work. But if we adopt the so-called analytic method, beginning with the geographical elements, there will be ample work for the first three school years in developing this general conception, in which the map will be a hindrance instead of an assistance. But before beginning to study the *structure* of the earth as a whole and its parts, teach the idea of the map so that it may be ready when it is needed, which will be *about* the fourth school year, according to the second method named above, which seems to many the most natural method of leading the child to an adequate conception of the geography of the earth.

II. HOW SHALL THE MAP BE USED?

It should be used as a means and not as the end. A text-book is not a book to be fed to hungry minds, for if the mind be gorged it will suffer mental indigestion. The map is placed in the text-book not as a part of the subject matter but as an aid in interpreting it by aiding the imagination and memory, and through its construction by the pupil to deepen the impression in his mind and test his idea of the part of the earth studied. That it is often made the end is apparent from the fact that many pupils finish the common school course in geography with no other conception of Italy than that it is a boot-shaped piece of yellow paper. Thus to memorize the details of a map, without having formed an idea from description, leaves little or no impression in the mind that is geographical. That the map is made

the reality instead of the sign is seen in having the pupils study the map of a continent first under the mistaken idea that he is learning geography. Again it is the outgrowth of making the map prominent from the beginning of the course before the child's ideas of surface are sufficient to carry him beyond it.

III. MAP DRAWING.

There are many systems of map drawing which it is not the purpose here to discuss. Any one of them may be made to serve the purpose well if ample time and care are given to have the work faithfully executed. The great mistake is in viewing it as a particular isolated point to be learned about every country i. e., when everything else to be taught about a continent is learned, then the attention is turned to mapping it. The map and the idea should grow together, in so far as completeness is concerned, until the work upon the continent is completed, the constructed map always representing the idea formed in the mind. It should not be merely copied. The purpose of map drawing, as here understood, is to reveal the conception which the pupil has formed of certain, or all of the features of the part of the earth studied and to give him skill in putting forth his ideas in some external form.

This is not to be understood to mean that pictures and drawings are not to be used. On the contrary they should be employed as much as possible, especially in primary work. But making a picture and a map are two things. A map of California with its capital and principal cities represented by dots as large as a mustard seed and drawn upon a certain scale may suggest certain facts to the mind. But the picture of California, if such could well be made, would not employ dots and lines in its construction, but must be so executed as to represent California as it is, to the eye. Hence a picture faithfully represents a thing as it is, while a map arbitrarily (in many ways) symbolizes it. The use of the map as an end instead of a means is only one of many examples in which the husk is given for the corn.

A. R. CHARMAN.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

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HUXLEY ON THE VALUE OF METAPHYSICS.

THE following extract is Prof. Huxley's valuation of metaphysics as a necessary part of all thought and as the natural complement of the physical sciences. It is taken from his lecture entitled "On Sensation and the Unity of Structure of Sensiferous Organs," Alden's edition of his works, pp. 366 and 367:—

"The maxim that metaphysical enquiries are barren of results, and that the serious occupation of the mind with them is a mere waste of time and labor, finds much favor in the eyes of the many persons who pride themselves on the possession of sound common-sense; and we sometimes hear it enunciated by weighty authority, as if its natural consequence, the suppression of such studies, had the force of moral obligation.

In this case, however, as in many others, those who lay down the law seem to forget that a wise legislator will consider, not merely whether his proposed amendment is desirable, but whether obedience to it is possible. For, if the latter question is answered negatively, the former is surely hardly worth debate.

Here in fact lies the pith of the reply to those who would make metaphysics contraband of intellect. Whether it is desirable to place a prohibitory duty upon philosophical speculations or not, it is utterly impossible to prevent the importation of them into the mind. And it is not a little curious to observe that those who most loudly profess to abstain from such commodities are, all the while, unconscious consumers, on a great scale, of one or other of their multitudinous disguises or adulterations. With mouths full of the particular kind of heavily buttered toast which they affect, they inveigh against the eating of plain bread. In truth the attempt to nourish the human intellect upon a diet which contains no metaphysics is about as hopeful as that of certain Eastern sages to nourish their bodies without destroying life. Everybody has heard the story of the pitiless microscopist, who

ruined the peace of mind of one of these mild enthusiasts by showing them the animals moving in a drop of water with which, in the innocence of his heart, he slaked his thirst; and the unsuspecting devotee of plain common-sense may look for as unexpected a shock when the magnifiers of severe logic reveal the germs, if not the full-grown shapes, of lively metaphysical postulates rampant amidst his most positive and matter-of-fact notions.

By way of escape from the metaphysical Will-o'-the-wisps generated in the marshes of literature and theology, the serious student is sometimes bidden to betake himself to the solid ground of physical science. But the fish of immortal memory, who threw himself out of the frying-pan into the fire, was not more ill-advised than the man who seeks sanctuary from philosophical persecution within the walls of the observatory or of the laboratory. It is said that 'metaphysics' owe their name to the fact that, in Aristotle's works, questions of pure philosophy are dealt with immediately after those of physics. If so, the accident is happily symbolical of the essential relations of things; for metaphysical speculation follows as closely upon physical theory as black care upon the horseman.

One need but mention such fundamental, and indeed indispensable, conceptions of the natural philosopher as those of atoms and forces; or that of attraction considered as action at a distance; or that of potential energy; or the antinomies of a vacuum and a plenum; to call to mind the metaphysical background of physics and chemistry; while in the biological sciences, the case is still worse. What is an individual among the lower plants and animals? Are genera and species realities or abstractions? Is there such a thing as Vital Force? or does the name denote a mere relic of metaphysical fetchism? Is the doctrine of final causes legitimate or illegitimate? These are a few of the metaphysical topics which are suggested by the most elementary study of biological facts. But more than this, it may be truly said that the roots of every system of philosophy lie deep among the facts of philosophy. No one can doubt that the organs and the functions of sensation are as much a part of the province of the physiologist, as are the organs and the func-

tions of motion, or those of digestion; and yet it is impossible to gain an acquaintance with even the rudiments of the physiology of sensation without being led straight to one of the most fundamental of all metaphysical problems. In fact, the sensory operations have been, from time immemorial, the battle-ground of philosophers."

[REMARKS BY THE EDITOR OF THE DEPARTMENT.]

1. Metaphysics as used in this extract is a common term including psychology, the science of knowledge and metaphysics proper or the science of things in themselves. The term psychology has no such common use. But notwithstanding this fact we have among us persons who call all metaphysics by the general term psychology. Nay more! They would call a scientific definition of many terms that are not in any way metaphysical *psychology*, simply because they require study in order to be understood.

2. If Huxley can say these things of the physical sciences which deal directly with matter and material functions and forces, how much more are they true of education which deals directly entirely with immaterial (metaphysical) objects. All teaching that disregards the metaphysical side of its science and art must be very rude and semi-barbarous, to say the least.

3. The "sound common-sense people," whose orthodoxy is "my doxy," and whose heterodoxy is any other doxy, do not seem to be limited to the latitude of Indiana, as at first sight one might think, but crop out among our beef-eating and ale-drinking Anglo Saxon cousins across the water. The fellow with a full cargo of "yard wide and all wool" common-sense, who goes around exhorting other people to leave off their uncommon sense and embrace his common article, is about as inevitable as the vender of ancient jokes.

4. Our friends the physical scientists who pretend to believe only what they can see, but who really resolve themselves into a class in speculative philosophy every time they begin to "discuss" their so-called facts, would do well to consider the force of this utterance of one of the greatest physical scientists of this century. His remarks, properly understood, become an excellent mirror for both sides of the science question.

5. On the other hand, let those who want to make up all knowledge out of metaphysics, find a true image of their incompleteness in these broad minded utterances. Those who think that the science of education and psychology are exactly synonymous terms may find a corrective here.

OFFICIAL DEPARTMENT.

EXAMINATION FOR STATE CERTIFICATES.

The order of the State Board of Education on the subject of examination for state and professional licenses, this season, is as follows:

That the examination for Teachers' State Certificates be divided into three parts, and that the questions, prepared by the State Board of Education, be submitted to applicants in the several counties by the Co. Superintendents, on the last Saturdays of February, March and April of each year. That the subjects be presented to applicants as follows:

LAST SATURDAY OF FEBRUARY.—*Forenoon*, 9 o'clock, Arithmetic; 10:30, Physiology. *Afternoon*, 1:30, Reading; 2:30, U. S. History; 3:30, Geography.

LAST SATURDAY OF MARCH.—*Forenoon*, 9 o'clock, Algebra; 10, Physics; 11, Science of Teaching. *Afternoon*, 1:30, German; 2:30, Botany; 3:30, U. S. Constitution; 4:00, American Literature.

LAST SATURDAY OF APRIL.—*Forenoon*, 9 o'clock, Geometry; 10, Rhetoric; 11, Physical Geography. *Afternoon*, 1:30, Gen'l History; 2:30, Chemistry, or Geology, or Zoology; 3:30, English Literature.

The applicants for State Certificates must have taught school not less than forty-eight months, of which not less than sixteen shall have been in Indiana. They shall present to the county superintendent, before entering upon the examination, satisfactory evidence of good moral character and professional ability, and pay five dollars each, the fee prescribed by law, which can in no case be refunded.

That a person holding a thirty-six months' license shall be exempt from the February list given above, and may receive a State Certificate by passing satisfactorily on the March and April lists.

That a person holding a thirty-six months' license, whose next preceding county license was for the longest period authorized by law, may receive an eight-years' "professional license" by passing satisfactorily on the March list alone.

That the grade obtained in the four-years' course in the "Professional Studies" of the Indiana Teachers' Reading Circle may be offered as an equivalent for the examination in the Science of Teaching.

That the county superintendent shall, immediately after the close of each examination, send the manuscripts, testimonials and fees of applicants, to the Superintendent of Public Instruction. The manuscripts shall be examined and graded by the members of the State Board, and certificates shall be granted to those applicants who make a general average of *seventy-five per cent.*, and do not fall below *sixty per cent.* any subject.

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

IN CONNECTION with the National Association which is to be held at Chicago next summer, there will be an Educational Exposition. Write to Albert G. Lane, Chicago, for circular of particulars.

DOES THIS MEAN YOU?—When you subscribed for the Journal, and was granted time in which to pay, was it not distinctly understood that you would pay not later than January 1, 1887? A few persons have forgotten either the understanding or the date.

THE NORMAL TEACHER has been consolidated in the Ind. School Journal, and the Journal is now being sent to the subscribers to the Teacher. This fact does not seem to be understood by some who did not read carefully the December number of the Journal.

THE January issue of the Journal has received an unusual number of hearty commendations. The following is a sample of many letters received:

WINFIELD, KAN., January 24, '87.

W. A. BELL—*Dear Sir:* Your articles on "Should Religion be Taught in the Public Schools," makes your January Journal to me the most valuable educational pamphlet that has ever fallen into my hands.

Yours,

JOHN E. EARP.

OWING to the fact that the circulation of the Journal has been steadily increasing we have exhausted most of the issues for 1886. That we may be able to assist those who have missed numbers and wish to complete their files, we make the following proposition to those who do not care to preserve their back volumes: We will extend the subscription of any person, one month, for each Journal sent us in good condition, for February, April, May, June, September, October, November of 1886. Send with Journal your name and address.

THERE is no question of the good done by temporary opening of windows and doors for a minute or two while scholars are exercising. The effect may be supposed to disappear in a minute or so; but when combined with a short physical exercise in the standing posture, its effect, both moral and physical, is undeniably good. In a carefully

conducted school this should be done every hour, the period of five minutes being allotted for that purpose, unless there is a regular recess. At recess time, also, it should be the rule that no child shall remain in the room, but that all shall go to the play-ground, unless the weather absolutely forbids.

THE STATE TEACHERS' ASSOCIATION.

The recent State Association was one of the largest and one of the best yet held. The enrollment was the largest ever made, and this is highly creditable. It is estimated that three-fourths of those in attendance enrolled—the other fourth, thoughtlessly of course, enjoyed the benefits but allowed others to pay the expenses.

Prof. Seiler's proposition to change the manner of nominating officers so as to prevent "setting up things," caused a ripple of unpleasant discussion. It is very much to be regretted that there was any occasion for such a resolution, but that there was no one familiar with the past can deny.

In electing Mrs. McRae as its next President, the Association did itself honor. Indiana is the first to elect a woman to this office, and sets a worthy example to sister states. These meetings are composed largely of women, and it is only fair that the honors as well as the labors should be divided.

The mistake of the committee in not nominating Mrs. Dennis for re-election on the Reading Circle Board was finally satisfactorily arranged, and Mrs. Dennis will continue to serve in the place she has filled so satisfactorily.

THE NEW REQUIREMENT FOR LICENSE.

The order of the State Board that went into effect January 1, 1887, requiring teachers to pass examination on certain books in order to procure license, seems to be going into operation without any opposition. Every one says "it is a good thing." It will certainly encourage the reading of some good books.

In this connection the following circular from the State Superintendent to county superintendents will be of general interest:

"Many questions having been asked in regard to the proper mode of action under the recent order of the State Board of Education, requiring applicants for teacher's license to present an essay or review to the county superintendent, it has seemed desirable that uniform directions be issued from this office.

The order of the Board, made May, 1886, is as follows: "After the first day of January, 1887, every applicant for a teacher's license shall present to the county superintendent, at the time of the examination, a review or composition upon one of the following books: Tale of Two Cities, David Copperfield, Ivanhoe, Heart of Midlothian, Henry

Esmond, The Spy, The Pilot, The Scarlet Letter, The Sketch Book, Knickerbocker's New York, The Happy Boy (by Bjornson), Poems of Longfellow, Poems of Bryant, Poems of Whittier, Poems of Lowell. Said composition shall contain not less than 600 nor more than 1,000 words, shall be in the applicant's own hand-writing, and shall be accompanied with a declaration that it is the applicant's original work. The county superintendent shall consider the merits of such composition in determining the applicant's fitness to teach."

In enforcing this order the following rules are suggested:

1. Since many applicants will not have had notice of the new order, the superintendent should permit the essay to be presented within three weeks after the applicant has written for examination, but no license should be issued to an applicant till his essay has been filed.

2. An applicant who passes or who fails to pass an examination, and applies at a subsequent date, should be required to file a different essay and upon a different book.

3. The only practical way of grading the essay is to treat it as a separate subject, giving it the grade which it deserves, and counting it in the general average as a tenth branch, added to Science of Teaching and the eight common branches."

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR DEC.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

READING.—1. Give an example of the kind of a selection that requires a monotone.

2. How much time should be allowed pupils for preparation of the Third Reader lesson? the Fourth Reader lesson? and Fifth Reader lesson? and what should be the nature of the preparation in each case?

3. Name three American poets, and point out the special feature that characterizes the works of each.

4. What preparation should a teacher make for conducting a class exercise in the Fifth Reader?

5. What is the use of punctuation marks? What mistake is sometimes made in the reading lesson in regard to their use?

6. Read a selection of prose and one of poetry.

50.

HISTORY.—1. Name five leading prose writers of the United States, and mention one prominent work of each.

2. Give an account of the settlement of Maryland.

3. Give an account of the "Election Commission."

4. Name five of the most important battles of the Civil War, giving the result of each, and the commanding Generals on each side.

5. Give a short biographical sketch of Thomas Jefferson.

ARITHMETIC.—1. Does multiplying rods by $16\frac{1}{2}$ reduce them to feet? Why? 5, 5.

2. From thirty and three thousandths take thirty-three thousandths. 5, 5.

3. A log, 16 ft. long, was 20 in. square at one end, and 12 in. sq. at the other end, tapering regularly; what was its solid contents in board measure, making no allowance for waste in sawing? 5, 5.

4. Simplify $\frac{\frac{1}{2} \text{ of } \frac{1}{2}}{\frac{1}{3} \text{ of } \frac{1}{3}}$ and explain your work. 5, 5.

5. Why does dividing a fraction by a fraction multiply the value of the numerator of the multiplicand? 10.

6. A druggist buys 5 lbs. avoirdupois of a drug at \$5 per lb., and sells it at 48 cents an ounce Troy; how much does he gain? 5, 5.

7. Divide .06 by .003, and demonstrate the rule for pointing off decimals. 5, 5.

8. A merchant decants 50 gals. of wine into bottles holding, it is said, $\frac{1}{4}$ gal. each, but it is found that 11 bottles hold only two gals.: how many bottles does he gain in all? 5, 5.

9. What is the longest line that can be measured in a room 20 ft. long, 15 ft. wide, and 10 ft. high? 5, 5.

10. What is the cube root of $37\frac{1}{2}$? 5, 5.

PHYSIOLOGY.—1. What are the uses to the system of the perspiration? 10.

2. Distinguish between secretion and excretion. Name five of the most valuable secretions.

3. Give your plan for ventilating a school-room in which no arrangement has been made for a system of ventilation.

4. Give the composition of bone. How does the proportion of ingredients vary at different ages?

5. Explain the value of exercise as a preserver of health.

6. Why is play more healthful to a child than work?

7. Why is a rest immediately after eating advisable?

8. What deleterious effects upon the health come from breathing through the mouth?

9. What provision is made in the system for preserving an even temperature of the body?

10. In what way does bathing tend to preserve health? To what abuses is it liable?

SCIENCE OF TEACHING.—1. What two fundamentally different views are held as to the essential nature of the human mind? Explain, briefly, each view.

2. Define sense perception and consciousness.
3. What distinction is to be made between the *science* of education and the *art* of education?
4. What is meant by the *principles* of education? State a principle of education.
5. From what sources are educational principles derived?
6. Name four leading books that have been written on education.
7. In teaching English Grammar what value do you attach to parsing? To analysis? Why?

GRAMMAR.—1. Long ago, when people used to worship many gods, a carter was striving to make his way with a heavily laden wagon through a miry lane; the wagoner, who did not wish to take more trouble than he could help, was content to let the horses carry him while he cracked his whip and sang songs. Give the use of each infinitive in this sentence.

2. Give sentences illustrating all the forms of the relative *who*.
3. What is the distinction in the use of the relatives *who*, *which*, and *that*?
4. Define inflection. What inflection have nouns?
5. Give the principal parts of the following verbs: Build, dare, eat, forsake, hang, know, mow, lie (to recline,) awake, set.
6. Correct, if necessary, giving reasons:—
 - a. How came them to do it so?
 - b. The pupil will receive a reward from the teacher who is diligent.
7. In what ways may adjectives and adverbs be compared?
8. How many genders have nouns? Why?
9. What reason is there for calling the pronoun *what* a double relative?
10. There is no use to say anything more. Analyze this sentence.

GEOGRAPHY.—1. Explain the causes of the change of seasons in this latitude.

2. What are prairies?
3. Name the capitals of Germany, Norway, Canada, Kansas, North Carolina.
4. Name the chief products of Pennsylvania.
5. For what are the banks of Newfoundland noted?
6. What is the Gulf Stream? What effect has it on the climate of Europe?
7. Bound Chili. What is its chief seaport?
8. Why does not the snow melt on the Alps in the summer?

9. Through what waters would you pass on a voyage by water from Duluth to Panama?

10. What is the origin of salt lakes? What change in the climate of Utah would render the Great Salt Lake fresh?

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. Nathaniel Hawthorne, *Scarlet Letter*; George Bancroft, *History United States*; Wm. H. Prescott, *History of Ferdinand and Isabella*; John L. Motley, *Rise of Dutch Republic*; Washington Irving, *Life of Washington*.

2. Maryland was originally a part of the lands granted to the London Company, but in 1632 the northeastern part of what was then Virginia was cut off by the King and given to Lord Baltimore, without the consent of Virginia, but with a proprietary charter which granted to all inhabitants religious freedom. This did not come, as is generally supposed, from Lord Baltimore, but from the King, yet it was in favor of the Catholics who were persecuted, politically, in the mother country. King Charles called the colony Maryland, in honor of his Queen. Settlements were made at several points, chiefly on the Potomac, beginning near the mouth. King William deprived the then proprietor of his colony because he supported James II. When Pennsylvania was granted to Penn a dispute arose as to the northern boundary of Maryland, which was settled upon the present line by a survey made by Mason and Dixon, since which time that line and its continuation westward has been known as Mason and Dixon's Line. In 1692 the colony became a church colony, and so remained until the Revolution.

3. In the presidential election in 1876 Samuel J. Tilden and Rutherford B. Hayes received so nearly an equal number of electoral votes, and so much irregularity had occurred in various states both in voting and in the action of various electoral bodies, as to make a certain determination of the result well nigh impossible. The difficulty was largely increased by the political formation of the two houses of Congress, the Republicans controlling the Senate and the Democrats the House. The question to be determined was whether the presiding officer of the Senate should as usual count the votes, or whether the alleged irregularities required the appointment of some other person or persons to do this. A compromise resulted in the formation of a Joint High Commission, consisting of five Senators, five Representatives, and five Judges of the Supreme Court. This Commission, after investigating all the contested returns, two days before the date for inauguration, by a vote of 8 to 7, declared Hayes and Wheeler elected over Tilden and Hendricks by one electoral vote. This decision, dis-

agreeable as it was to the Democrats, quietly settled a controversy that threatened serious evils.

4. *a.* First battle of Bull Run resulted in the defeat of the Union Army. Generals—Union, McDowell; Confederate, Beauregard. *b.* Shiloh, or Pittsburg Landing; at first disastrous to the Federals, but finally resulting in their success. Generals—Union, Grant; Confederate, at first Johnson and Beauregard, then Beauregard, Johnson being killed. *c.* Antietam; really a drawn battle, but in moral effects greatly for the Union army. Generals—Union, McClellan; Confederate, Lee. *d.* Missionary Ridge; Union army successful. Generals—Union, Grant; Confederate, Bragg. *e.* Gettysburg; Union army successful. Generals—Union, Meade; Confederate, Lee.

5. Thos. Jefferson, son of Col. Peter Jefferson, was born in Albemarle county, Va., April 2, 1743. Educated privately by a Scotch clergyman, and then at William and Mary College he studied law, entered the House of Burgesses where he took strong grounds against the British Ministry. Sent to Congress he took a prominent position, was author of the Declaration of Independence, and persistent in his opposition to the Ministry. After the war, with Adams and Franklin he was sent to negotiate treaties with the European nations, and afterwards as Minister plenipotentiary to France, where he imbibed rather radical Democratic principles. He was in 1796 elected Vice President, and in 1800, President. He placed the Democrats in charge of all the important Federal offices. During his administration the Louisiana Purchase was made, Ohio admitted to the Union, Indiana and Mississippi Territories were erected, giving the Union practical and civilized possession of all the territory west to the Mississippi, and control of the great river to the Gulf. Jefferson was re-elected President. After his term he retired to his estates in Virginia, giving his time to their cultivation, the building up of Virginia University and the promotion of letters. He will always be remembered for these efforts, as also for being the author of the decimal system of coinage, and of the statute for religious freedom. He died on July 4, 1826, within an hour of John Adam, his great compatriot and political rival.

ARITHMETIC.—1. (*a*) No. (*b*) $16\frac{1}{2} \times \text{any number of rd.} = \text{rd.}$, not feet.

2. $30.003 - .033 = 29.97$. Ans.

3. $\frac{1}{2}$ of (20 in. + 12 in.) = 16 in., average diameter.
 $16 \text{ ft.} \times 16 \text{ in.} \times 16 \text{ in.} = 341\frac{1}{3} \text{ bd. ft.}$ Ans.

4. $\frac{1}{8}$ of $\frac{1}{7} = \frac{1}{56}$; $\frac{1}{8}$ of $\frac{3}{7} = \frac{3}{56}$. $\frac{1}{56}$, the numerator, divided by $\frac{1}{7}$, the denominator, = $\frac{1}{8}$. Ans.

5. Because the increase of the *number* of parts is greater than the decrease of the *size* of the parts.

6. 5 lb. avordupois = 80 oz.; $80 \times \$.48 = \38.40 , selling price. $\$38.40$, selling price, — $\$25$ cost, = $\$13.40$, gain. Ans.

7. $.060 \div .003 = 20$. By annexing a decimal cipher to .06, its value is unchanged, and both dividend and divisor are like numbers; hence their quotient is units.

8. $50 \text{ gal.} + \frac{1}{2} \text{ gal.} = 250 \times = 250 \text{ bottles.}$ 11 bottles contain 2 gal., 1 bottle contains $\frac{1}{11}$ of 2 gal. = $\frac{2}{11}$ gal. $50 \text{ gal.} + \frac{2}{11} \text{ gal.} = 275 \times = 275 \text{ bottles.}$ 275 bottles — 250 bottles = 25 bottles. Ans.

9. $\sqrt{20^2 + 15^2} = 25 \text{ ft.}$ $\sqrt{25^2 + 10^2} = 26.9 + \text{ft.}$ Ans.

10. $37\frac{1}{2} = \frac{100}{2.7}$; $\sqrt[3]{\frac{1000}{2.7}} = \frac{10}{3}$ or $3\frac{1}{3}$. Ans.

GEOGRAPHY.—I. The change of seasons in this latitude is due to the annual revolution of the earth around the sun, while its axis is, at the same time, inclined $23\frac{1}{2}^\circ$ to the plane of its orbit.

2. Prairies are extended tracts of land, either level or slightly rolling, and usually destitute of trees.

3. Berlin is the capital of Germany, Christiana of Norway, Ottawa of Canada, Topeka of Kansas, Raleigh of North Carolina.

4. Coal, iron, salt, petroleum, agricultural and dairy products, including maize, tobacco, wheat, rye, and orchard fruits.

5. For extensive cod fisheries.

6. The Gulf Stream is a warm ocean current which flows through the Gulf of Mexico, and passing through Florida Strait crosses the Atlantic Ocean in a northeasterly direction. It greatly modifies the climate of the western part of Europe, making it several degrees warmer than the opposite shore of the Atlantic.

7. Chili is bounded on the north by Bolivia, on the east by Argentine Republic and Patagonia, south by Patagonia, west by the Pacific Ocean. Its chief seaport is Valparaiso.

8. It is owing to the great breadth of the snow belt, and to the configuration of the mountains by which deep ravines are formed, and to the great amount of moisture by the south winds, all of which causes combined heap up masses of snow and ice so deep that the rays of the sun can not melt them in one season.

9. Lake Superior, St. Mary's River, Lake Huron, St. Clair River and Lake, Detroit River, Lake Erie, Welland Canal, Lake Ontario, St. Lawrence River and Gulf, Atlantic Ocean, rounding Cape Horn, into the Pacific Ocean, Bay of Panama.

10. Those lakes which have no outlet must necessarily be salt, since the saline particles brought in by their tributaries can not escape, and in the process of evaporation must be deposited upon the bottom and sides of the lakes. Any change in the climate of Utah which would increase the moisture and reduce the amount of evaporation, would tend to freshen the water of the lake, but without an outlet it could not become wholly fresh.

GRAMMAR.—1. *To worship* is an adverbial modifier, limiting the meaning of *used*. *To make* denotes purpose and limits *was striving*. *To take* is the object of *did wish*. *To let* denotes result and limits the meaning of *content*. (To) *carry* is construed with *horses*, and the phrase *horses (to) carry* is the object of *let*.

2. 1. "The man, *who* feels truly noble, will become so."

2. Cling to the one *whose* friendship has been tested and found true.

3. The gentleman *whom* you met is mayor of the city.

3. *Who* is applied to persons, and other objects when personified. *Which* relates to inferior animals and things without life. *That* relates to both persons and things.

4. Inflection is the change in the form of a word to show its different meanings and uses. Nouns are inflected to show differences of case and of number.

5. Awake, awoke or awaked, awaked. Set, set, setting, set. Build, builded or built, builded or built. Dare, durst or dared, dared. Eat, ate or eat, eaten or eat. Forsake, forsook, forsaken. Lie, lay, lain. Hang, hung, hung. *Hang*, to take life by hanging, is regular. Know, knew, known. Mow, mowed, mowed or mown.

6. *a* How came *they* to do it so? *They* is the subject of came and must be in the nominative case. *b* The pupil who is diligent will receive a reward from the teacher. The diligence of the pupil is to be rewarded.

7. Adjectives and adverbs are regularly compared by annexing *er* and *est* to the positive; or, by prefixing the adverbs *more* and *most*, or *less* and *least*, to the positive.

8. Strictly speaking there are two genders, masculine and feminine, determined by sex. Neuter gender is applied to objects that have no sex, or to those in which sex is not considered.

9. *What* combines the office of relative and antecedent, and has a double construction in regard to case. For convenience, mainly, it is called a compound relative. It corresponds to the Latin "*id quod*," "that which."

10. "To say anything more" is the subject, "is no use" is the predicate. The subject is an infinitive phrase, of which *to say* is the base, modified by the object *anything*, which is modified by the adjective *more*; *is* is the copula and *use* the predicate noun, modified by the adjective *no*. *There* is an expletive, and is used to introduce the sentence.

SCIENCE OF TEACHING.—2. Sense perception is that power of the intellect by which it gains the knowledge of material objects. Consciousness is the power of the mind by which it knows its own acts and states.

3. The science of education treats of the principles of education, while the art teaches of the application of these principles.

4. A principle of education is a statement of a fact in regard to the nature of the mind. The following is a principle of education: "Knowledge can be taught only by occasioning the appropriate activity of the learner's mind."

5. By a careful analytical study of the mind as revealed in the consciousness, A teacher's motto should be, "Know thyself." He may then learn something of the minds of his pupils, by comparing their outward acts with his own.

6. Page's Theory and Practice; Education as a Science, by Bain; A Treatise on Pedagogy, by Hewitt; Compayre's History of Pedagogy, by Payne; Elements of Pedagogy, by E. E. White.

7. When properly taught is valuable as a review of the rules relating to the construction of the language. Analysis is of great value if too much stress is not put on the formal side. No sentence is thoroughly understood until it is analyzed.

READING CIRCLE DEPARTMENT.

OUTLINES FOR FEBRUARY.

HAILMAN'S LECTURES ON EDUCATION—LECTURE V.

One of the best of Prof. Hailman's series of lectures is the sixth, the subject of which is Christianity, Lord Bacon, and John Amos Comenius. We can not overestimate the tremendous power of the central doctrine of Christ, as a motive for education. The moment the conception of the equality of all human creatures entered the world, popular education and popular freedom became possible. The individual does not exist for the state, as was the case in Greece and Rome; nor for any favored person or class, as during the Middle Ages, but for himself. He has worth on his own account, without any bolstering through dependence on a king or nobleman. His own intrinsic worth made him worthy of development—of the highest education.

The early christians contributed little or nothing to education. Compayre points out the true reason. All learning, except the Bible, was pagan, and the christians shunned it as a plague that would endanger the very life of their ideas and doctrines. Through the influence of Tertullian, the Council of Carthage forbade the bishops to read the pagan authors. Only two other early christians of note have left us anything on education: Saint Basil and Saint Jerome. Saint Jerome's idea was that the body is an enemy to be subdued by fasting and mor-

tifications of the flesh. Here again we have a reflection of one of the dangers that menaced early christianity. It was in fear of being swamped by the pleasures and enjoyments of the pagan life it sought to proselyte.

That period of smouldering germination, miscalled the Dark Ages, produced nothing for education. The Renaissance, as the revival in Europe is not inaptly termed, brought with it new life for education. The germs of University life took root, learning increased a hundred fold, and, for the first time, a few minds began to question whether everybody and anybody are fit for teachers of primary schools. The first great names are Erasmus, Rabelais, Montaigne, and Ascham. Space forbids any explanation of their relation to the education of their times,

Coming at once to Comenius, Compayre's first paragraph epitomizes his services to education well: "For a long time unknown and unappreciated, Comenius has finally received from our contemporaries the admiration due him. Michelet speaks of him with enthusiasm as that rare genius, that gentle, fertile, universal scholar; and he calls him the first evangelist of modern pedagogy, Pestalozzi being the second. It is easy to justify this appreciation. The character of Comenius equals his intelligence. Through a thousand obstacles he devoted his long life to the work of popular instruction. With generous ardor he consecrated himself to infancy. He wrote twenty works and taught in twenty cities. Moreover, he was the first to form a definite conception of what the elementary studies should be. He determined, nearly three hundred years ago, with an exactness that leaves nothing to be desired, the division of the different grades of instruction. He exactly defined some of the laws of the art of modern teaching. He applied to pedagogy, with remarkable insight, the principles of modern logic. Finally, as Michelet has said, he was the Galileo, we would would rather say, the Bacon, of modern education."

But a word must suffice for Lord Bacon. Mr. Hailman justly calls attention to the fact that he did nothing directly for education. And yet, shall we not say that he did as much as a hundred Comeniiuses for it? He proposed the modern scientific method, which is to give us a science and art of education, as carefully elaborated and as free from baseless speculation and bald empiricism as are the exact sciences. Surely this was no mean gift! S. S. PARR.

MENTAL SCIENCE—WATTS ON THE MIND.

SUBJECT: "Mental Discipline,"—pp. 101-124.

I. ITEMS OF PROFESSIONAL IMPORTANCE:

1. Gradation—adaptation of work to mind. Secs. III-v, p. 102; XIII, p. 108; IV, (5), p. 123.

"The great problems of education have been to select the knowl-

edge best adapted to nurture the mind at its various stages of growth."
—*Johannot*.

2. The giving of prominence to fundamentals. VIII, 104.

"In estimating the value of a branch of study, we must consider not merely what it gives us, but what, through the engrossment of our time, it deprives us of."—*Baine*.

3. Advantage of settled convictions in the teacher. VIII, (6), 106.

A well-defined character and principled conduct, in the teacher, are the best instructors. The uncertain, the fickle, the unequal in character, hinder culture and the process of maturing. *The teacher should be established.*

4. The use and abuse of illustrative objects in teaching.

(a) "No object-lesson should be drawn from a book. (b) Pointless object-lessons are to be avoided. (c) Desultory object-lessons are of little worth. (d) In an object-lesson the teacher should guide by suggestion; not tell what is to be found."—*Johannot*.

5. The narrowness of Local Interests. pp. 115, 116.

The conditions of all best work with others, lie in an intelligent forgetfulness of self. Familiarity with merely local and personal interests only is mean and selfish. *The world is the teacher's school.*

II. SUMMARIES:—

1. Advantages of discriminating studies as to relative importance.

2. Rules for fixing the Attention. (a) "A state of mental wakefulness is favorable to attention. To fix the attention, reduce the force (influence) of outward things."—*Sully*.

(b) "Genius is nothing but continued attention."—*Helvetius*.

3. The three characters of a capacious mind.

4. The marks of narrowness of mind. (a) "In forming a judgment lay your hearts void of fore-taken opinions; else whatsoever is done or said will be measured by a wrong rule; like them who have a jaundice to whom everything appeareth yellow."—*Sir P. Sidney*.

(b) Re-read Sec. XI, p. 56; x, p. 78.

(c) "When the judgment's weak, the prejudice is strong."—*O'Hara*.

(d) "Who, born for the universe, narrowed his mind,
And, to *party* gave up, what was meant for mankind."

5. Rules for Enlarging Mental Capacity. [*Goldsmith*].

III. CROSS REFERENCES:—

1. With Chapter X, re-read Sec. v, pp. 41-4.

2. With (6), p. 113, read Sec. IV, p. 47; Sec. XIV, p. 28.

3. With pp. 115, 116, read pp. 80, 81.

IV. GEMS TO BE MEMORIZED:—

1. "Learn, betimes, to distinguish between words and things."

2. "Be not diverted from the end by every trifle you meet in the way."

3. "Pursue every inquiry and study in proportion to its real value and importance."

4. "There is little difficulty in confining the mind to contemplate what there is a great desire to know."

5. "Think it worth your waiting to find out truth."

6. "The passions call away the thoughts with incessant importunity."

7. "Labor to gain an attentive and patient temper of mind."

8. "We should inure our minds to method and order continually."

R. G. BOONE.

The work in History should extend from page 355 to page 455. The outlines will appear next month and will serve as a review.

READING CIRCLE NOTES.

✓ Minnesota Reading Circle holds examinations during the winter.

Nineteen States are reported as having some form of organization more or less similar to the Indiana Circle.

Bear in mind that the chief difference between the successful and the unsuccessful teacher is determination. As a rule, the teacher who will succeed in the school-room, is the teacher who, having begun a course of personal study, will finish it, even against odds.

✓ Kansas State Teachers' Association set apart one-half day—a full forenoon session—to the discussion of the Teachers' Reading Circle. The Indiana Association did nearly as well. It is hoped that much good will come from a free, calm, sensible consideration of the Indiana plan this year.

✓ The Canada Reading Circle includes three courses; one in Pedagogics, of six books; one in Physical Science, of eighteen books; and one in Literature and History of twenty-four books. Each course covers a period of three years; one-third of the books being taken each year. As the course is purely voluntary no examination is held. But when the teachers of any Division so read the course, they may ask examination of the local County Board. The Department issues a special certificate to such teachers as give satisfactory evidence in the examination of intelligent completion of the course. Geo. W. Ross, Toronto, Minister of Education, is the head of the organization.

While using the text-books named in the course of reading as a basis, every member should make the fullest possible research in others for further thought and information on the parts assigned and the published outlines. In almost every community—or at least in nearly adjacent ones—some book may be found whose contents will add to the

information or counsel of the text. Especially is this true of history and most of English history. While on Pedagogy, every live teacher has access to one or more educational periodicals whose numbers contain excellent and helpful material upon essential points.

Authoritative collateral reading intelligently done is not the least valuable part of the course.

Putnam county has 75 members in the local organization; and Supt. Smedley says the prospect is good for nearly as many more. What county has done better? If this were the average for the ninety-two counties if the state, we would have near 7000 members. Half this number are already reading. Reports from the several counties for publication in the Journal will be gladly received by either the editor (W. A. Bell), or by R. G. Boone, Bloomington, Ind.

From some one who has successfully tried the general discussion of Reading Circle work in Township Institutes, a report would be particularly appreciated: not one only, but reports from all the counties could be well used. Let them show how the work is accomplished: the general interest manifested; the difficulties met; how they were met; the order of exercises, proportion of work, etc. What are the advantages of such exercises in the township, (1) to the members, (2) to the teachers as a body?

"Not long ago it was believed that any scholar could be a teacher; but that time has gone by. Teachers need professional training. This is the office of the Normal School; but it is wholly inadequate to meet the demand for skilled teachers. This is forcibly illustrated by the condition of affairs in the State of Michigan, which is a type of the condition in other states. There is one normal school that graduates about 100 annually, and there are needed about 3000 new teachers each year. Besides the State Normal there is another institution, namely, the Teachers' Institute—a normal school on wheels—which is a great assistant. There is also another valuable auxiliary, because it reaches more teachers and is more permanent, the Reading Circle."

What Prof. Payne says above of the Reading Circle, is admirably put. It is well coordinated with the Institute, as an auxiliary of the regular professional school. If the Institute is a "normal school on wheels", the Reading Circle is one of daily mail. He who uses it best, is best served.



THE NATIONAL READING CIRCLE.

The Teachers' National Reading Circle was organized and legally incorporated 1885. Prof. W. H. Payne, of Michigan University, is the President, and is supported by eighteen other Directors, constituting the Official Board. The organization has provided eighteen courses of reading; six professional, three general culture, and nine

non-professional. In the first, twenty-seven books are recommended. Each course includes three groups of studies, two books in each group, one of which (three books for the year) may be taken by each reader.

The following is quoted from their recently-issued circular, concerning Examinations and Diplomas:

"Diplomas will be granted to members who pass the three different examinations in some one prescribed course, and who prepare an accepted thesis on some educational topic connected with the reading."

MISCELLANY.

THE Northwest Indiana County Superintendents will hold a meeting at Logansport February 17 and 18. All are invited.

BRAZIL.—The schools are growing—900 is the enrollment this year, with 50 in the high school. J. C. Gregg is still Supt.

THE Northern Indiana Superintendents and Teachers' meeting will hold its next session at South Bend, March 18 and 19.

BOURBON.—The pupils of the high school gave a Holiday entertainment that is highly commended. Supt. Whiteleather is given much credit.

JAY COUNTY.—The manual of the schools prepared by Supt. W. J. Houck is well arranged, sufficiently comprehensive, and tastefully printed.

LASELL SEMINARY, at Auburndale, Mass., was the first school of its class to provide a thorough course of cooking as a part of its course of study.

BROOKVILLE.—Very favorable reports come from the Brookville schools this year. C. W. McClure, the new Supt., is doing very satisfactory work.

BARTHOLOMEW COUNTY has an enrollment of over 85 percent of its children in the public schools. This is a good record. Amos Burns is superintendent.

THE Supt's (town and city) Convention of Southern Indiana, Northern Kentucky, and Southeastern Illinois will be held in Washington, Ind., at the Hyatt House, February 18 and 19.

THE SCHOOL TEACHER, Vol. I, No. 1, published and edited by J. L. Tomlinson & W. A. Blair, at Winson, N. C., is on our table. It looks well and reads well, and deserves success.

THE CONNERSVILLE schools, under the direction of Supt. Hunter, held public oral examinations for a week, beginning January. 26. An urgent invitation was extended to visitors. A public oral examination for the special benefit of parents is a good arrangement.

PURDUE UNIVERSITY is very prosperous. The increase this year in the College Department has been much greater than it ever was before in one year. The enrollment now is double what it was four years ago. Everything so far as we can hear is moving on smoothly.

LA GRO.—The La Gro high school netted \$93.10 from an entertainment given during the Holidays. The money will be applied to the purchase of books for the already handsome library. Last year 250 volumes were added to the library with money raised by entertainments. H. F. Wilkie is principal.

QUERY.—In oral spelling should pupils be required to designate capital letters, hyphens, etc.?

Ans.—It is perhaps well for a time, but not necessary after pupils have it fixed in mind that all proper names begin with capitals, and most compound words are written with a hyphen.

HAMILTON COUNTY held its annual association at Noblesville, Jan. 15th. The attendance was very large and the exercises were profitable and entertaining. The "foreigners" present were R. G. Boone, Geo. F. Bass, Prof. ——— of Wabash College, State Supt.-elect La Follette and W. A. Bell. Supt. Hutchinson is a hard worker.

THE BOONE COUNTY teachers held a two-day association January 21 and 22. The attendance was large and the exercises good. Pres. D. S. Jordan lectured on the evening of the 21st. Supt. La Follette has done a good work in this county, and it will be difficult to fill his place when he assumes the duties of his higher office.

PRINCETON has the foundation of an excellent library. A two-story brick building $23\frac{1}{2} \times 80$ feet has been erected adjacent to the public square. The upper floor makes an elegant library room, and the lower floor will yield a part of the revenue necessary to sustain the library. A local tax has already yielded \$600 for the purchase of books, and will yield \$800 more within a year. A. J. Snoke, Supt. of the schools, is largely responsible for this work. He is also responsible for celebrating an Arbor Day last fall and having planted on the school grounds about 300 trees, and about 200 more in the city. He should be called to account.

PROBLEM.—Find two numbers whose product is equal to their sum.

Let x =greater,
and y =less.

Then—

$$(1) \quad xy = x + y.$$

Whence—

$$(2) \quad y = \frac{x}{x-1}.$$

Now, if $x=1 : y=\infty$

" 2 " 1.

" 3 " $\frac{3}{2}$.

" 4 " $\frac{4}{3}$.

" a " $\frac{a}{a-1}$.

" b " $\frac{b}{b-1}$.

For every positive value of x greater than unity, y is positive. If x is less than unity, y is negative.

In like manner may be found two numbers whose product equals their difference.

JOHN M. RICHARDSON.

DAINGERFIELD, TEXAS.

ANSWER TO QUERY.—The query on page 59 of January Journal is badly stated. As it reads the answer would be \$333½ for each person. But I presume it should read, "How much should each receive so as to receive the same amount when becoming of age?" With this view I submit the following solution:—

Let a = the amount received by each at maturity.

$$\text{Then } \frac{a}{(1.06)^7} + \frac{a}{(1.06)^5} + \frac{a}{(1.06)^3} = 1000.$$

$$a + a(1.06)^2 + a(1.06)^4 = 1000(1.06)^7.$$

$$\text{and } a = \frac{1000(1.06)^7}{1 + (1.06)^2 + (1.06)^4}.$$

$$\text{A's share} = \frac{a}{(1.06)^7} = \frac{1000}{1 + (1.06)^2 + (1.06)^4} = \$295,327.$$

$$\text{B's share} = \frac{a}{(1.06)^5} = \frac{1000(1.06)^2}{1 + (1.06)^2 + (1.06)^4} = \$331,830.$$

$$\text{C's share} = \frac{a}{(1.06)^3} = \frac{1000(1.06)^4}{1 + (1.06)^2 + (1.06)^4} = \$372,843.$$

Respectfully,

JNO. C. GREGG.

BRAZIL, IND

WHITLEY COUNTY.—The annual Institute was held at Columbia City, December 27 to 31, inclusive. The sessions were well filled with teachers during the day, and literally packed with teachers and citizens at the evening lectures. W. C. Barnhart, ex-Supt. of Columbia City schools, was again called from his home in Illinois to feed the Whitley county teachers from his store of pedagogical knowledge. W. F. L. Sanders, of Cambridge City, did excellent work all week in primary reading, geography, language, etc. His work, as usual, was highly appreciated. H. B. Brown, of Valparaiso, was present one day, and presented linear measure. An unprecedented interest is being manifested in school work, by the teachers of Whitley county, under the management of Supt. Knisely. This county is coming to the front! The rigid examinations are trimming the teachers up.

It was requested by a majority of the teachers to hold the next institute in August of 1887.

— SOUTHERN INDIANA TEACHERS' ASSOCIATION.

The next session of the Southern Indiana Teachers' Association will be held at Madison, March 23, 24 and 25. The following is a brief outline of the program:—

PAPERS.—Howard Sandison, R. G. Boone, Joseph Carhart, H. M

La Follette, J. A. Carnagey, Dr. Fisher, H. B. Hill, and Mrs. Alice Bridgman.

DISCUSSION OF PAPERS.—L. H. Jones, A. H. Graham, J. J. Mills, W. S. Almond, J. E. Wiley, P. Day, E. F. Sutherland. Brief discussions: W. J. McCormick, E. E. Stevenson, A. N. Crecraft, Miss D. C. Simpson.

POPULAR ADDRESS—Prof. C. Hall, Franklin College.

WELCOME ADDRESS—M. C. Garber, Madison.

INAUGURAL ADDRESS—E. A. Bryan, President Association.

The committee expect to secure the usual reduction in railroad and hotel rates. The present outlook promises a full attendance, and an interesting and profitable session. A complete program will appear in the next issue of the School Journal. J. H. MARTIN, *Ch'n Com.*

INDIANA STATE TEMPERANCE UNION.

To all Friends of Temperance in the State of Indiana, Greeting:

A very large majority of the people of our State are opposed to the use of intoxicating liquors as a beverage, and to the drink traffic as a business. These constitute by far the better classes of our population. But there exists no bond of union among them, and they are not agreed as to the best method of promoting the cause that lies near their hearts. On the other hand a small minority, many of whom are prompted by sinister motives, are banded together, presenting a bold and united front to any and every effort to restrict or regulate their nefarious calling. The open saloon, a relic of a less enlightened age, the chief foe to American institutions, lives and flourishes only because its opponents are divided. The time has come for a new departure. We must stand together that we may know our numbers and strength, and gain enthusiasm and wisdom by counsel.

Prompted by these considerations a number of gentlemen assembled on call in the city of Indianapolis on the 28th of December last, and organized the INDIANA STATE TEMPERANCE UNION. The purpose of this society is to effect a union of all in our State, without regard to nationality, color, party or sect, who desire the overthrow of the Rum Power. While holding prohibition as the ultimate end to be sought, the UNION will leave its members to favor any lesser measure as a preliminary and to employ at all times such methods and form such other affiliations as may seem good to themselves. Our UNION will promote a better understanding and a helpful friendship among those now strangers, and enable all of different views to advance what will be approved by all, namely:—

1. To secure an enrollment of all in every community in the State

who favor total abstinence and prohibition, that the public mind may be known.

2. To hold meetings for the discussion of every phase of the temperance question, thereby increasing the sentiment in favor of this reform.

3. To circulate tracts and books and papers bearing on this question, and to invoke the aid of the pulpit, the press, and every other instrumentality that can be serviceable in advancing the temperance cause.

4. To aggregate in organized form the greatest amount of moral, intellectual and social force, in a perpetual protest against this gigantic evil, which must sooner or later disappear.

The meeting above named appointed the following committee on organization: Rev. J. E. Gilbert, D. D., of Indianapolis; Professor Erastus Test, of Westfield; H. S. Herr, M. D., of Westfield; Hon. E. B. Reynolds, of Hagerstown; Rev. H. J. Meck, of Noblesville; John Kendall, of Pecksburg. This committee was instructed to issue this address, inviting all of like views to become members of this UNION by forwarding their names at once to the Treasurer, Dr. H. S. Herr, of Westfield. To all who so respond another circular will be issued shortly, calling a state convention to be held in the city of Indianapolis, at which time the nominating committee will report a list of officers for election, and such other business will be transacted as may be needful to carry on the purposes of the UNION. Let it be borne in mind that any person may become a delegate to that convention by forwarding the name and post-office address as above directed.

Editors of papers and ministers of the Gospel are invited to assist us in giving publicity to this address, the former by inserting it in their columns, the latter by reading it to their congregations.

By order of the Committee:

ERASTUS TEST, *Sec'y.*

PERSONAL.

Aris Jones is principal at Zionsville.

P. V. Voris holds sway at Jamestown.

W. J. Shelburn is in charge at Whitestown.

J. F. Powell is Prin. of the Kendallville high school.

G. L. Harding still continues in charge at Middlebury.

F. T. Miller is principal of the New Amsterdam schools.

R. H. Harney is still doing good work as Supt. at Lebanon.

L. S. Baldwin is director of educational affairs at Thorntown.

J. E. Mannix, formerly of Indiana, is now in charge at Uniontown, Kentucky.

James E. McDaniel has succeeded Miss Tarney as principal of the high school at Bourbon.

- Gen. W. B. Hazen, chief of the Signal Service and Western Report system, died in Washington January 16th.

Mrs. Jennie H. Goodwin, for many years Prin. of the Kendallville high school, is now Supt. of the Rome City schools.

Albert H. Worrell, one of the leading teachers of Hendricks county, was recently married to Miss Mary E. Ader, of Clayton.

Eli F. Brown, well known to many teachers in this state, is still Supt. of the schools at Paducah, Ky., and is succeeding well.

S. P. McCrea, last year principal of the Princeton high school, is now Supt. of the Mt. Vernon, Ill., schools, and is getting on nicely.

T. H. Barton, Prin. of the Maplewood schools, is out on a leave of absence, and has a clerkship in connection with the present legislature.

S. E. Miller is now serving his nineteenth year as Superintendent of the Michigan City schools. He is almost as old as Merrill, of La Fayette.

W. C. Barnhart, formerly of this state, but for a few years past of Mt. Vernon, Ill., is now principal of the Franklin School at Peoria, Illinois.

C. S. Williams, Supt. of Clark county, Kan., together with thirty of his ninety teachers, are ex-"Hoosiers." Mr. Williams' address is Ashland.

F. Treudley, for many years Supt. of the schools at Union City, is now Supt. at Youngstown, O., and report says he is doing well. Just like him.

M. W. Harrison, the new Supt. of the Wabash schools, has mastered the situation, the schools are running smoothly, and good work is being done.

Prof. E. L. Youmans, the noted scientist, founder and editor of the *Popular Science Monthly*, died at his home in New York City Jan. 18, in the sixty-sixth year of his age.

Geo. F. Bass, editor of the School Room Department of the Journal, is making quite a reputation as a humorous lecturer. He has had numerous calls and gives satisfaction wherever he goes.

J. T. Merrill has been connected with the La Fayette schools *twenty-three years*—the last twenty years as Superintendent. Bro. Merrill is the most venerable superintendent in the State.

- Miss Agnes I. Rounds, late instructor in history in the State Normal School, has accepted a position as instructor in the Teachers' Training School at Cambridge, Mass., and is also on the editorial staff of the *New England Journal of Education*.

John Cooper, one of Indiana's oldest and most accomplished educators, is getting on very smoothly as Superintendent of the Leavenworth, Kan., schools, and is liking his work and his new home.

Mrs. Mattie C. Dennis, after much entreaty on the part of her friends, has consented to continue to serve as a member of the Reading Circle Board. No member has served more faithfully or more effectively.

E. J. Robison, so well and so favorably known in the northern part of the state, will soon remove his headquarters from Warsaw to Indianapolis, and represent Van Antwerp, Bragg & Co. in the entire state.

Cyrus W. Hodgins, principal of the Richmond Normal School, presided over the late State Teachers' Association in such a way as to give general satisfaction. His inaugural address showed much thought and was well received.

E. C. Hewett, Pres. of the Illinois State Normal School, gave the annual address at the State Teachers' Association, and acquitted himself with credit, as always. A full report of his address will appear in the next number of the Journal.

Katie Petery, a pupil of the eighth grade New Albany public schools, has neither been absent nor tardy since she entered school eight years ago. She is one of the best pupils of her class, and never has an imperfect lesson. What other pupil in Indiana can show such a record?

W. N. Hailman, Supt. of the La Porte schools, is writing a series of articles which are being published in one of the local papers on "Purpose and Organization of the Public Schools." They cover all the phases of school work and must be valuable reading for his "constituents."

J. A. Wood, formerly Supt. of the Salem schools, now fills the chair of Mathematics in the Southwest Kansas College, at Winfield. He reports the school in good order with bright prospects. This is the college of which Prof. J. E. Earp, formerly of De Pauw University, is president.

Mrs. Emma Mont. McRae, principal of the Marion high school, was elected President of the Indiana State Teachers' Association. Mrs. McRae is well known as one of the leading institute workers of the state, and she will fill the place as well as it has been filled by any one of her thirty-two predecessors.

Edward A. Olney, of Michigan University, author of a series of mathematical works of high merit, recently died at his home in Ann Arbor, Mich. Prof. Olney was not only a great mathematician and a great scholar, but a prince among men. He was a christian gentleman in the best use of that term.

D. Eckley Hunter, who is serving his first year as Supt. of the Connersville schools, passed his 53d milestone January 6th. His thirteen

teachers, in collusion with his wife, arranged a complete surprise for him on the occasion. An elegant supper, a complete set of Hawthorne, and a merry good time were a part of the program.

Bruce Carr, for so many years the popular agent of Van Antwerp, Bragg & Co., and known to hundreds of Indiana teachers, is now in possession of his office as Auditor of State. On Jan. 26, the day on which he was to take his office, he was very sick, and as the Journal goes to press he is better but not able to leave his bed.

J. H. Hays, a former Hoosier, is Superintendent of the Winfield, Kan., schools; Misses Fannie and Jessie Stretch, former Hoosiers, are among his teachers; and Miss Ella Kelly, another native Hoosier, is Supt. of Cowley county, of which Winfield is the county seat. By the way, why couldn't a Hoosier woman be Co. Supt. in Indiana?

BOOK TABLE.

GINN & COMPANY, of Boston, have decided to publish a *Journal of Morphology*, with C. O. Whitman as editor.

COMMON SCHOOL EDUCATION, is the name of a new monthly, edited and published by Wm. A. Mowry, of Boston. The first number is an excellent one.

THE PUBLIC SCHOOL: Edited by County Supt. W. H. Caulkins, of La Fayette, is one of the best county papers in the state, or in the West. Success.

THE OFFICE COMPANY, of New York, has just published Dutton's Analytical Book-Keeping Chart, which is an exhibit, in tabular form, of the science of accounts.

I. N. VAIL, of Barnesville, O., holds new and radical theories in regard to various geological questions. A small pamphlet entitled the "Coal Problem," before us, furnishes some interesting suggestions.

OUR LITTLE MEN AND WOMEN for January is simply exquisite. The reading matter is adapted to the "little ones," and the pictures are numerous and a delight to the child-heart. Published by D. Lothrop & Co., Boston, at \$1 a year.

VICK'S FLORAL GUIDE is by far the fullest and handsomest seed and bulb catalogue that has ever come to our notice. It is a "thing of beauty." James Vick, Rochester, New York, can furnish anything in the line of flower or vegetable seed.

THE CURRENT, Chicago, the western literary weekly, has changed its form with the new year. It is now a 16-pp. 2-col. folio, a much more convenient form than the old one. Price \$4 a year. It is a literary paper worthy of liberal patronage.

EASY EXPERIMENTS FOR SCHOOLS AND FAMILIES: With Home-made Apparatus. By A. R. Horne. Chicago: A. Flanagan.

This is a small book in paper cover, containing about 80 pages, and is what it purports to be, a book of easy experiments. It will certainly be suggestive to teachers. A descriptive catalogue of Helps for Teachers can be had by addressing with stamp, A. Flanagan, Chicago.

WORDS CORRECTLY SPOKEN, is the title of an essay on the correct use of words, neatly bound. Price 15 cents.

POPULAR SYNONYMS, is the title of a pocket-edition of synonyms in common use. It is often very desirable to have a synonym that one may avoid the repetition of a word. Price 12 cents.

Both the above books by Burrows Brothers & Co., Cleveland, O.

- **THE SWISS CROSS** is the name of a monthly magazine that has just been started by the Agassiz Association, and is published in New York by N. D. C. Hodges. It is scientific but not technical. Its purpose is to spread among the people a love and a knowledge of nature. The editor-in-chief is Harlan H. Ballard, the president of the association. The first number is full of articles interesting to the general reader. Price \$1.50.

THE NATIONAL QUESTION BOOK: By Edward R. Shaw. New York: E. L. Kellogg & Co.

This is one of the best books of its class we have seen. The book is carefully graded and if properly used will be a valuable aid to teachers. Question books when used as an aid in reviews, in adding supplementary and test questions, etc., are helpful and to be commended, but when substituted for a thorough and systematic study of a subject they are harmful.

VAN ANTWERP, BRAGG & Co., of Cincinnati, have just issued a series of German readers for beginners, including a Primer and a First, Second, and Third Reader. The books are on the latest and most approved plan of teaching German. They are filled with entertaining stories that children will strive to master because of the interest they excite. The books are well illustrated and tastefully bound. Any one interested in teaching German to children should not fail to examine these books. See advertisement for further description.

THE RUSSIAN REVOLT: Its Causes, Condition, and Prospects. By Edmund Noble. Boston: Houghton, Mifflin & Co.

This little volume is full of interest to any one who cares to know the inside history of the greatest and yet least civilized of the great European powers. The country itself, the people, and the government, all make an interesting study; and just at this time with the prospect of a great European war an inside view of Russia will be particularly attractive. Price \$1.00.

VICTOR HUGO'S SHAKESPEARE: Translated from the French by Melville B. Anderson. Chicago: A. C. McClurg & Co.

This is said to be one of the great French novelist's most characteristic productions, and is a real and valuable contribution to the best literature. Prof. Anderson (who by the way is Professor of English Literature in Purdue University), has made a translation that has elicited the highest praise of the best critics. Every student of Shakespeare should have the book, which is published in good style.

INTERNATIONAL EDUCATION SERIES: Edited by Wm. T. Harris. New York: D. Appleton & Co. C. E. Lane, Chicago, Western Agt.

Under the above caption the Appletons are publishing a series of books for teachers in four volumes. No. 1 is the "History of Education"; No. 2, "Educational Criticism"; No. 3, "Systematic Treatises on the Theory of Education"; No. 4, "The Art of Education."

The first three of these are now published. They are all valuable books, written by eminent educators, and every teacher can be profited by reading them. Price per volume, \$1.50.

CLASSICS FOR CHILDREN: A Second Reader by Stickney. Boston: Ginn & Co. T. B. Ballard, Columbus, O., agent for Southern Indiana, and W. S. Smyth, Chicago, agent for Northern Indiana.

A Primer and a First Reader have preceded this. These are charming books for supplementary reading, whether for home or school use. In this Second Reader instead of short lessons the plan is to give continued stories, and thus exciting greater interest. The narrative and conversational styles are employed rather than the descriptive. The book is neatly printed and bound and appropriately illustrated.

AN ELEMENTARY COURSE IN PRACTICAL ZOOLOGY: By Buel P. Colton. Boston: D. C. Heath & Co.

This is simply a hand-book to direct in the study of the animal kingdom. The author believes that it is far better to study a few typical forms carefully and from the objects themselves than to read many books about many animals. The book is principally a *guide* to study. Instead of describing an insect, it simply names the parts and tells the student what to look for, where to find it, how to dissect, what instruments are needed and how to use them, etc. No other such book is published for beginners.

PRIMARY LESSONS IN LANGUAGE AND COMPOSITION: By W. H. Maxwell. New York and Chicago: A. S. Barnes & Co. Cyrus Smith, Indianapolis, agent for Indiana and Michigan.

This little volume is the first of a two-book series on language and composition. This volume, by means of pictures, questions, suggestions, etc., by easy steps leads the child to correct forms of language both oral and written; it does not touch the science of language, or technical grammar. First the correct use of language, and the reasons and rules afterward, seems to be the plan. The exercises are well graded and the suggestions to teachers are excellent.

SCHOOL-ROOM GAMES AND EXERCISES: By Elizabeth G. Bainbridge, brought out by The Interstate Publishing Company, of Chicago and Boston. The author believes that the introduction of such exercises as the book contains will not only rest the pupils, but will brighten their faculties, concentrate their attention, and strengthen them for a renewal of more difficult mental work. It is really teaching by new methods; no less teaching that there is amusement in it. Many of the games lead to exactly the same results as what are called serious studies, and there are none of them but what call for some healthy exercise of the mind. The volume has been compiled from many sources, and is one which can be warmly and conscientiously commended to school superintendents and school teachers everywhere. Price, 75c.

CONTRIBUTIONS TO THE SCIENCE OF EDUCATION: By W. H. Payne, of Michigan University. New York: Harper & Brothers. W. J. Button, Chicago, Western Agent.

Those who know Prof. Payne do not need to be told that whatever he writes on educational subjects is well worth reading. The above named book is made up of a series of lectures on the *science* of education. The author concedes the great importance of methods but insists that the ultimate test of methods is *doctrine*. A method not based on a principle must be misleading. Prof. Payne does not have much faith in the educational "reformer" who catches hold of some neglected truth, concentrates his whole soul on his new discovery, denounces the whole existing order of things as irretrievably bad, and by his declamation incites the unthinking and the malcontent to a revolution in methods. Of course the problems discussed in these essays are "open questions," and there will be for some time to come disagreement among the best thinkers on many of the points raised, but one of the merits of the book is that the author does not claim to have "settled things." No thoughtful teacher can read the book without much profit.

BUSINESS NOTICES.

BOARDS OF EDUCATION contemplating changes in Principalship—High Schools, Intermediate, Primary, or Special Teachers—should write early to the Teachers' Cooperative Association, 170 State street, Chicago, and get the names and addresses of the best teachers willing to make a change. Many of the leading schools of the West have secured their teachers through this Agency. All communications from Boards and Superintendents are held as strictly confidential by the manager, Mr. Orville Brewer, who gives his personal attention to the selection of teachers for vacancies. We advise all Boards to correspond with him in confidence. We can vouch for his faithful discharge of all business entrusted to him.

READ the advertisements this month; it will pay you.

SPECIAL attention is called to the advertisement of D. H. Baldwin & Co., on the second cover page. Many teachers should be interested in it.

SALESMEN WANTED!—Salary and expenses paid! For terms and particulars address (mention this paper) W. R. McNary & Co., Nurserymen, Dayton, Ohio. 2-21.

TEACHERS who desire to learn Shorthand, or obtain a practical business education, will find the facilities ample and complete at the Business University, this city.

HOUGHTON, MIFFLIN & Co., of Boston, publish nearly all the books that the State Board ask teachers to read for examination. See their advertisement on another page.

HOME STUDY.—Latin and Greek at sight, use the "Interlinear-Classics." Sample page and Catalogue of School Books, free. C. DeSilver & Sons, No. (Y) 1102 Walnut street, Philadelphia, Pa. 2-6t.

WANTED.—115 teachers, superintendents, professors, &c., Free Registration. Liberal cash pay to all who will work for us. American College Directory and U. S. Public School Directory, free to teachers. Address, with stamp, C. H. Evans & Co., Managers, AMERICAN TEACHERS' BUREAU, Evans Buildings, St. Louis, Mo. 2-2t.

BOOKS FOR THE YOUNG.—Special attention is called to the well selected list of books for young people, which may be found among the advertising pages this month, of Burrows Brothers & Co., of Cleveland, O. 5

TEACHERS WANTED!—Of all kinds. Principals, and Assistants; also several for Art, Music, etc. Application-form and information free.

Address: THE CORRESPONDENCE UNIVERSITY, Chicago, Ill. 5-1y
desire it.

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ill. 1-tf.

CONSUMPTION CURED.—An old physician retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y. 12-9t

TEACHERS! Our New School Aids are used for conducting day schools in good, quiet order. A set contains 230 large pretty chromo excelsior, credit and merit cards, elegantly lithographed in ninety different designs, colors and mottoes. Price per set \$1; half set, 115 cards, 50c. 800 new, brilliant designs chromo school reward, diploma, friendship, scripture, wedding, visiting, birthday, Christmas, new year, prize, fine gift cards, school reports and teachers' supplies. Large set samples, 30c.; half set, 15c. Price list free. All postpaid by mail. Stamps taken. 1-5t. 9-7t.

FINE ART CO., WARREN, PA.

INDIANA SCHOOL JOURNAL.

Vol. XXXII.

MARCH, 1887.

No. 3.

GEOGRAPHICAL INSTRUCTION IN GERMANY.

I. THE LOWER SCHOOLS—*a*. THE PUBLIC SCHOOLS.

[*Translated from the German by Howard Sandi on.*]

IN Prussia, according to the general regulations of October 15, 1872, the public school of several classes, the school with two teachers, and the school with one teacher, which is either the one-class school or the half day school, constitute the standard (norm) public school arrangement.

In the public school of one class the children of every compulsory age (6 or 7 to 13 or 14 year of life) are instructed simultaneously in one and the same room by a common teacher. The number of the same shall not rise above eighty. The children of the lower grade receive, as a rule, weekly, twenty, those of the intermediate and higher grades, thirty hours of instruction. Where the number of children rises above eighty, or the school-room is not adapted to a smaller number, and the circumstances permit not the employment of a second teacher: so also there, where other conditions seem to make this necessary, the half-day school may be arranged, with the consent of the government, for all the classes of which thirty-two hours weekly may be fixed. Are two teachers assigned to one school, then is the instruction to be imparted in two separate classes. If in such a school the number of children rises above one hundred and twenty, the school is to be arranged into a three-class school. In this are given weekly, to the third class, twelve, to the second class, twenty-four, to the first class, twenty-eight hours of instruction.

In schools of three and more classes, so far as the same do not fall under the preceding arrangement, the children of the under grades receive weekly, twenty-two, those of the intermediate grades, twenty-eight, those of the higher, thirty to thirty-two

hours of instruction. To the necessary *means of instruction* of every school belong :—a globe, a wall-map of the home province, a wall-map of Germany, a wall-map of Palestine, some representations for instruction in general knowledge of the world (cosmology), a ruler and compass. For schools of several classes, [more than three] these means of instruction are to be supplied in proportion.

To the necessary *means of learning* of every school belong :—a school reading book, a slate and pencil, sponge, ruler and compass; as to writing books [note books] at least a diary, [i. e., a note book for general purposes], a writing book for calligraphy, a book for orthography and composition exercises, a drawing book.

Of the pupils of the public school of several classes [more than three] may be required the purchase of special small guides for the instruction in the natural sciences; also the purchasing of a graded set of readers and a hand atlas. These have to use, likewise, for the separate subjects of instruction, special note books.

The public school, also the school of one class, is formed into three divisions, which correspond to the various ages and educational stages of the children. The division of the eight school years upon the same varies as follows:

Lower Grade—First and second school years.

Intermediate Grade—Third and fourth school years.

Higher Grade—Fifth, sixth, seventh and eighth school y'rs. Or

Lower Grade—First and second school years.

Intermediate Grade—Third, fourth and fifth school years.

Higher Grade—Sixth, seventh and eighth school years. Or

Lower Grade—First, second and third school years.

Intermediate Grade—Fourth and fifth school years.

Higher Grade—Sixth, seventh and eighth school years.

Where a public school has four classes, two are of the Intermediate grade (3d and 4th and 5th and 6th school years); where it has six of these, two classes belong to each grade.

- In the one-class public schools the hours are divided upon the separate subjects and grades as follows:

	Lower Gr.	Inter. Gr.	Higher Gr.
Religion	4	5	5
German (Language, Reading, Writing)	11	10	8
Arithmetic and Geometry	4	4	5
Drawing	—	1	2
Realities (History, Geography, Natural Science.)	—	6	6
Singing	1	2	2
Gymnastics (Feminine Hand-work, respectively)	—	2	2
	20	30	30

In the schools of several classes:—

	Lower Gr.	Inter. Gr.	Higher Gr.
Religion	4	4	4
German (Language, Reading, Writing)	11	8	8
Arithmetic and Geometry	4	4	6
Drawing	—	2	2
Realities (History, Geography, Natural Science.)	—	6	6 (8)
Singing	1	2	2
Gymnastics (Feminine Hand-work, respectively)	2	2	2
	<u>22</u>	<u>28</u>	<u>30 (32)</u>

In the half day school, and in the school with two teachers and three classes, the necessary variations occur according to the exigencies. (In such a reduction of the number of hours per week, the proportion of the division of hours given in the foregoing arrangement shall be taken as the rule.)

It follows from the above that the geographical instruction in the Prussian common school begins in the middle grade, i. e., at the earliest in the third school year (eighth to ninth year of life), and at the latest in the fifth year of school (tenth to eleventh year of life.)

Concerning the separate subjects of the regulations there come here for consideration:—

BIBLICAL HISTORY. (For evangelical scholars.) Some stories are presented to the children of the lower grade; out of the Old Testament are presented, especially, those from the first book of Moses, and perhaps, in addition, those of the early life of Moses and David; and of the New, those of the birth, childhood, death and resurrection of Jesus Christ; and some narrations out of his life are chosen, preferably, those lying near to the understanding of children. In the further advance of instruction the pupils receive a systematically arranged series of the most important narratives out of all periods of the sacred history of the Old and the New Testaments; and upon the basis of the same, a connected recital of sacred history, in which especially the life of Jesus comes prominently into the foreground, and into which also, the planting and first propagation of the Church is to be received.

To this history, that of the founding Christendom in Germany, of the German Reformation, and knowledge concerning the life of the evangelical Church in our times is added.

GERMAN. The exercises in oral expression require no separate instruction. They rather prepare for the writing and reading instruction and accompany it upon its more advanced stages. They receive their material in the lower grade from the subjects that are most simple and best known to the children; in the intermediate grade from groups of pictures and the like; in the higher from the language exercises of the reading book.

ARITHMETIC. In the under grade, the operations of denominate and undenate numbers in the number scale from 1 to 100; in the middle grade, the operations in the unlimited number scale with denominate and undenate numbers are learned and practiced; in the latter also applied problems in allegation, reduction—ascending and descending, and the simple rule of three are solved. The work of the higher grade is the fraction, which must have been already prepared for in an appropriate manner in the lower grades.

FORM. (Geometry.) The line (straight, equal, unequal, parallel), the angle and its kinds, the triangle, square, and other regular figures, the circle and its auxiliary lines, the regular solids, constitute the work in *geometry*. The instruction in geometry is to be connected with the instruction in arithmetic as well as with that of drawing.

DRAWING. In the instruction in *drawing*, all the children are to be equally and simultaneously employed, and by constant exercise of the eye and hand to be prepared thereby so that they may be able, by use of the ruler, scale and compass to copy given figures according to a given reduced or enlarged scale, and to draw geometrical views of objects of simple outline, according to a given scale, for example, of room furniture, garden surfaces, dwelling houses, churches and other objects which afford straight lines and large surfaces.

In the instruction in the *Realities* [Zoölogy, Botany, Geography, Physics, History] the teacher is after careful preparation to present the material, concretely and orally, using the reading book for enlivening, completing and reviewing. In schools of several classes special guides may also be used. Dictations are not permitted; also the purely mechanical learning of historical dates, lines of rulers, etc., names of countries and cities, numbers of inhabitants; of names, characteristics of plants, measure and proportion numbers [phyllotaxy, or the arrangement of leaves in Botany, and multiple proportions and combining weights in Chemistry] in Natural Science is forbidden. Geography and Natural Philosophy are to be based upon observation, which in Geography is to be accomplished by means of the globe and the map, in Natural History by means of the object itself or good illustrations, in Physics, at least in schools of several classes, through experiment. Everywhere, also in the schools of several classes, the advance is to be by a gradual elaboration of the material from the lighter to the more difficult, from the nearer to the more remote.

In *History*, biographies out of the older history of the German fatherland, and from the older history of Brandenburg are to be given. From the time of the Thirty Years War and the reign of the great Elector, the series of biographies is to continue uninterrupted.

The geographical instruction begins with a knowledge of the home region. Germany and the most important topics of the general knowledge of the earth—the form and motion of the earth, the origin of day and night, and of the seasons, the zones, the five oceans and the five grand divisions of the land, the most important states and cities of the earth, the largest mountains and rivers—constitute its succeeding stage. The amount of the material to be presented is conditioned by the kind of school. In the arranging of the plan of instruction it is nevertheless to be preferred, in case of necessity, to limit the material of the plan of instruction, rather than to renounce the clear presentation of it, and to permit the instruction to degenerate into the communication of mere nomenclature.

Besides the structure and functions of the human body, the subject of instruction in *Natural History* is constituted of:—the minerals, plants and animals of the home region, the great beasts of prey of other regions; the animal and plant region of the Orient, and those cultivated plants the products of which are in daily use by us (for example, the cotton plant, tea shrub, coffee tree, sugar cane.) Of the domestic subjects, those come into the foreground which, through their *use* to man (for example, domestic animals, birds, the silk-worm, grain and fabric plants, fruit trees, salt, coal, or through the damage which they do to man (poison plants), or perhaps, on account of the peculiar characteristics of their nature and their mode of life (e. g., the butterfly, the trichina, the tapeworm, the bee, the ant,) especially arouse interest. Everywhere, the accustoming of the children to an attentive observation and their education to a judicious contemplation of nature is to be striven for.

PHYSICS. In the Natural Science instruction in a school of one or two teachers, the pupils are to be led to an approximate understanding of those phenomena by which they are daily surrounded. In schools of several classes the material is to be so enlarged that the most important ideas of the theory of *equilibrium* and *motion* of bodies, of *sounds*, of *light*, of *heat*, of *magnetism*, and of *electricity* are to be given, in order that the children may be in the condition to explain the ordinary phenomena of nature and the common machines.

Out of the regulations concerning the education of the *public school teacher*, (of Oct. 15, 1872) the following belong here:

The applicant must, at his entrance into the Normal School, have completed the seventeenth year of his life, and is not yet to have exceeded the twenty-fourth.

In the entrance examination the one to be examined has to show in Geography "a general knowledge of the five grand divisions of the earth and of the oceans; a closer [knowledge] of the land and water divisions of Europe; and a specific [knowledge] of those of Germany; the principal ideas of mathematical geography."

The Normal School consists of three classes. The plan of geographical instruction in these is the following:

"Third Class—two hours. The most important topics of the home region and of general geography. A general knowledge of the surface of the earth. The four grand divisions of the earth, other than the European. The interpretation of maps.

Second Class—two hours. Europe, Germany, Mathematical Geography.

First Class—one hour. Advanced methodical introduction, especially in respect of the application of atlases, wall maps, globes, telluriens, and other means of illustration.

Every student of the Normal School must be in possession of a good hand atlas, which he uses during the instruction. The adopted guide is the school abridgment of the greater work, which the teacher in his progress follows."

In the final examination, the answering of three questions belongs to the written work. Of these one is to be obtained of history, one of natural science, and one of geography. For each of these answers two hours of time are to be allowed. The themes [questions] are determined by the commissary of the provincial school board, on the proposal of the Normal School faculty; and the works [answers] are wrought out in seclusion [klausur] under the oversight of a Normal School teacher. The oral examination extends over all the subjects of the Normal School, within the limits fixed by the plan of the institution. The qualification [to teach, i. e., license] is denied if the one examined does not give satisfaction in Religion, or German, or Arithmetic, or in more than three of the other subjects, [Singing, Drawing, Writing, History, Geography, Geometry, Natural Science, Pedagogics.]

WIT loses its respect with the good, when seen in company with malice; and to smile at the jest that plants a thorn in another's breast, is to become a party in the mischief.—*Sheridan.*

6) APPLICATION OF FRÖBEL'S EDUCATIONAL PRINCIPLES TO THE PRIMARY SCHOOL.

[SYNOPSIS OF THE ADDRESS OF W. N. HAILMAN AT TOPEKA, KAN.]

FOR the purpose of this sketch Fröbel's Educational Principles are classed under three heads: the *religious*, *ethical*, and *physio-psychical*.

The first of these, the *religious* principle, concerns the ultimate aim of education, which it finds in *unity* and *wholeness of life*. In accordance with this principle, education has to do at every step with the whole child in all his relations, and in all these relations is to lead him to conscious peace. As an individual, the young human being is to be set towards full accord in all the phases of his being; his knowings, feelings, willings and doings,—thought, motive, and conduct must lie on the same plane and tend towards the same unity, which to thought is truth, to motive principle, and to conduct righteousness. Socially his life should be attuned to the strong, sweet voice of love; he should sympathise with his surroundings in all that concerns true welfare; his deepest yearnings should be to allay suffering, to relieve from sin, to make smooth the paths of peace; these should become to him joy, glory, wealth—more precious than all else that goes by these names. He should be at one with his *race*, placing himself in knowledge and action on the basis of highest achievements, in tendency in the current of highest ideals. In *nature* and the *universe* he should learn to read the Creator's laws; their contemplation should teach him active obedience and thus secure to him the inner freedom by which he may approximate the Father's perfection.

The second of these, the *ethical* principle, concerns the proximate end of educational activity which lies in character, in the persistent drift of being towards goodness and thoroughness,—towards highest perfection. Whatever the educator says or does, plans or executes, his example, his adjustments of surroundings, his courses of study and practice, his lessons and tasks, must look towards the formation and establishment of character. All educational activities are good in the measure in which they do

this, and there is nothing else that can give them a claim for consideration. Every educational activity, worthy of the name, must be, even in its minutest details, an organic part of a larger process that runs through the pupil's entire being, having its roots far down in the depths of feeling, pushing its branches under the quickening influence of sunny thought into the mobile regions of conduct where it may yield a rich harvest of golden deeds. All educational activity that sees no end beyond itself, is doomed to die and to burden the pupil's life with dust and ashes: here it burrows in the feelings and is stifled to death in their rich soil; here it soars aloft heedlessly, and lingers out of life on the barren heights of frosty thought; here it is wafted over the arid plains of moral precept, or exhales a scanty life in the pitfalls of aimless busy-work.

The third, or *physio-psychical* principle, concerns the immediate essential features of the human being under education, which it finds in growth and development. At every step it regards and respects the spontaneity of growth, and leads it through the medium of the trustful obedience of faith, to the conscious masterful obedience of freedom. Nothing less will do: the spontaneity of growth furnishes the springs of action and life; trustful obedience seems the life-sustaining strength that comes from practice and habit; and in freedom alone man reaches true humanity. An education that stops at spontaneity of growth, makes a despot; another that stops at trustful obedience, makes a slave; only conscious masterful obedience to a law whose terms are known and understood makes free; only this can free us from the disgraceful shackles of suicidal appetite, snatch us from the inglorious ease of self-seeking prudence, and lift us into the pure heaven of principle, which is the only worthy abode of man.

The *methods* of an education based on these principles, are necessarily *physio-psychological*, i. e., obeying the recognized laws of physical and psychical development, so far as the pupil is concerned; and *analytico-synthetical* so far as the subjects of instruction are concerned. At every point, the pupil's physical and psychical power, the stage of development he may have reached, and the influence and bearing of whatever we may pro-

pose to do upon these things, are to be considered. The child who can lift only one pound is not to be asked to lift two, nor is his strength to be frittered away in efforts that lie far beneath his capacity; the little learner whose interest is still bound up in external variety should not be repelled by having presented to him a surfeit of considerations of inner unity, nor should he be held on the lower planes of interest with childish tricks and gew-gaws when he has commenced to feel at home on higher planes; the pupil whose innocent heart is open to considerations of sympathy alone, should not be prematurely forced into considerations of grim-visaged prudence, nor have suspicions aroused against the behests of stern principle,—nor should his heart be closed to the voice of duty by too long continued efforts to gild even the nearest duties with some artificial pleasure.

The presentation of subjects of instruction, as a whole and in their various departments and parts, should be analytico-synthetic. They should come to him on the side of feeling, and through thought, be led to his will. Feeling analyzes, the will sympathizes, and thought mediates between the two. Feeling gets and learns; thought holds and makes ready; the will gives and does.

The school must cease to pay almost exclusive attention to the first half of these activities,—and must begin to look upon the second half as at least of equal value, making them getters, learners, and holders for the sake of making them givers and doers. It should do this and every detail of its work in subjects of instruction. Thus in arithmetic, not only in its study as a whole, should the child first analytically find numbers, their properties, and mutual relations, and then learn to use this knowledge in life and for life from the lower commercial applications to its higher applications in scientific research and invention: but each new fact or principle that comes to him should at once be suitably applied in all convenient and feasible ways of synthetic activity. At first all subjects are more or less blended in the universal interest of earliest school-life, and successively gain prominence and independence as analytic processes successively develop the need for special instruction in certain directions;

and again, each new subject so found should, by a kind of larger synthesis, aid and lift all other subjects, and life as a whole at every step.

The course of study, therefore, demands a concentric arrangement of all subjects and of all material of instruction. At the center stands the child with free, full, all-sided out-look. Nothing within the reach of his power and interest is excluded. All subjects are open to him:—number, form and size, objects and phenomena of nature and of art, the concerns of man and of society are open to him; all these things he may observe, test by experiment, contemplate and use; limitations lie not in these subjects but only in his power. The fact that he can not divide $\frac{7}{9}$ by $\frac{3}{40}$ does not rob him of the pleasure he may have in finding $\frac{1}{2}$ of $\frac{3}{4}$; his inability to determine the square of 317 does not keep him from the control of the square of 2 or 4; his failure to appreciate meteorological laws does not exclude him from the observation of wind and weather; his lack of interest in the wars of the Spanish Succession does not keep him from a living concern in the history of his village, or in the story of Paul Revere.

The course of study should be managed so that at every point it may lift and help the learner toward the accomplishment of his life-purpose, which is *productive or creative activity*. Even where a subsequent division of labor on economic grounds assigns to one or the other human being mediatory activities, these always derive their dignity from their bearing on the creative work of mankind. Every subject of instruction, in its beginnings and its progress, should, therefore, be closely related to modifying, arranging, adapting activities in which the child may exercise his power as a maker of things, and learn to feel the mastery of spirit over matter. In this lies the value of manual training practiced in the kindergarten and in the La Porte primary schools, and proposed by Froebel as an essential element of all school-education—a manual training distinct from industrial training, inasmuch as it looks to art more than artisanship, and looks for its criteria not in the external product but in the internal development of the child.

Neglect of this causes so much of our educational work to “end in smoke”, subjecting the pupil to the mortification of finding

himself, when he enters life, rather hampered than helped by what the school gave him.

The influence of the college and university, too, is much reduced in scope and value because of its disregard of the creative soul of man. Too often it prepares only for a life of refined leisure which it dignifies with the name of culture.

Again while the course of study is to permit and foster growth, it should not overlook the necessity of guidance and watchful care. Not unfrequently the notion that education should be a growth or rather a development from within outward, has induced teachers to look upon guidance and guardianship as improper interferences with the requirements of free development.

This is a pernicious error; free growth is by no means inconsistent with guidance and watchful care: on the contrary these are needed to keep growth free, to keep it from going astray, to secure for it the best direction, to shield it from weedy parasites and enervating water-shoots, to protect it from the inroads of noxious insects and fungi. The kindergarden has suffered much from errors in this direction on the part of ill-advised persons who seem to look upon it as an institution run by little children; and certain primary schools who take pride in "new departures" on the "kindergarten plan" frequently are remarkable only for extraordinary lack of order, method, and healthy development.

Froebel's educational principles, far from being adverse to method in the course of study, rather look upon method as an important proximate end of the work in all its phases. If the child's senses are to be cultivated, this should be done in such a way as to lead him to a methodical use of his senses; teaching him to hear, see, etc., in an orderly manner, and to interpret in an orderly manner in language, what he may have observed.

If the child is to become acquainted with his immediate surroundings, he is to do this in a methodical way, proceeding regularly from the near to the remote, from the whole to the parts, from the outer to the inner, from their nature to their uses, etc. If the child is to study arithmetic, he should again follow the lead of some rational method, examining numbers in their elements and relationships, in their properties and laws, and using

them for the various purposes of school and life in strictly methodical ways. Nothing can be more methodical than Fröbel's suggestions on the studies of language and science, which in his teaching are ever ready, orderly helpers, and never arrogantly set themselves up as disorderly, illegitimate, ultimates.

Lastly, in all subjects of instruction of a course of study based on these principles, the things involved should precede the words in which these are symbolized or described, and this is equally true in expression and impression. Ideas of number, of form, of the qualities of objects, etc., must first come to the child from things. A variety of numbers should be counted, a variety of forms seen and handled, qualities of objects observed, experienced, found by experiment, etc.; and the word used during all this time simply to fix and arrange the thought-images that come from these things, to mediate between the child's outer and inner world, to spiritualize—as it were—for the child—its material experience. Similarly, the thought-images of the child should at first, be expressed chiefly in things. Arithmetical problems should be solved with the help of things, form-ideas expressed with the help of clay, paper, or other plastic or mobile material, the qualities of objects used for suitable purposes; and the word should come in to interpret or confirm the child's purpose, to impress upon his handiwork the pupil's spiritual seal. Only on such a basis, can the word become to the child a living word, only thus can the child's language in school and out of it, grow and develop in significance and value with the child's mental growth and development; only thus can it become the right-hand of thought in the creative life of man.

[In the Harrison School building, a typical exhibit of such work from the La Porte schools had been displayed. The speaker referred to this by way of illustration so far as form-work is concerned.]

When the child comes to school (at the age of six), he is already quite familiar with the fundamental forms,—cube, cylinder and sphere. He may not know them by their names, nor be able to describe them; but he knows their forms quite well and distinguishes them with little trouble. A first step would

be to test the character of this knowledge. With plastic clay the pupil makes these forms—"square hat-boxes, square meat-bl'ks, paper-weights, marbles, balls, rollers, pots, kettles, bird's nests, etc. This will lead him to observe more closely the character of the surfaces, the curvature or straightness of the edges, the formation and sharpness of the corners, and other features. All this time, corresponding thought-images become fuller and more accurate, as well as purer and more distinct, and are more and more truly symbolized in proper terms of language.

Very soon the square and circle stand out with sufficient clearness in the child's mind to serve as points of issue for a second step. The pupil fashions square and circular tiles and adorns these with simple impressions around the border, in order to get hold of the outline. At first these tiles are made of any suitable size, since the form and outlines are the essentials; later on they are made of given dimensions,—four, two, three, and five inches square or diameter. The surfaces of these are analyzed with the help of lines—diameters, diagonals, etc.;—tending to the center or passing through it. The resulting surfaces are measured, engraved, painted, described,—the ideas and their expressions by hand and word growing simultaneously.

Alternating with these exercises are others with tinted square papers. These are folded in the direction of diagonals and diameters and cut into parts. These parts are then described, measured, re-arranged symmetrically, and fastened on paper in these new arrangements. Splints, long paper strips about an inch wide, properly folded, and slats are used to bring, express, and apply ideas of linear relations; and dots, lentil-seeds, etc., fix ideas of point relations. This course in the primary department concludes with the study of the cube with the help of clay. The surface of the cube is analyzed and adorned; the cube itself is analyzed in a variety of ways; and at last a few prominent crystalline forms, such as octahedron, tetrahedron, and rhombohedron, are developed from it.

During all this time and from the very beginning, drawing goes hand in hand with these exercises. Here, too, the square and circle form the basis of the work. All drawing sheets are

of these shapes—four to six inches in diameter. For exercises in automatism ordinary manilla wrapping paper is used, properly cut and folded, so that each exercise may yield to the pupil a symmetrical and mathematically perfect whole. For experimental and inventive drawing, the square sheets are ruled in a network of smaller squares. Throughout, the drawing of the primary school is to be managed not for its own sake as in the ordinary manual or “system,” but wholly as the hand-maid of mental growth. [This course was fully illustrated in the exhibit.]

The number work is to be done at first wholly with the help of things. These things, however, should be of the simplest kind,—colored cubes, cylinders, and balls, splints and seeds. Complicated things, such as toy flags, rakes, spades, axes and the like draw the child’s attention away from number to the details of the object as such and hinder the growth of number notions. The stringing of beads, such as Mrs. Hailman’s Second Gift Beads, furnishes the best start. The simple differences of shape, and the clear color contrasts, furnish excellent means for distinct operations in all kinds of analysis and synthesis. Subsequently, a number of the spherical beads strung on a wire or shoe string are placed permanently at the back of the child’s desk as a mobile and adjustable “numeral frame” which helps the child in all arithmetical operations—inwardly and outwardly. Splints, seeds, and the form-work already sketched, offer rich opportunities for varied and fruitful application of ideas gained.

In the study of things and phenomena collections and descriptions and systematic observation, are recommended as suitable starting points. Collections of the simplest things,—of different kinds of paper, wood, cotton, woollen and silk goods, buttons, seeds, spices, etc., are systematically made and mounted by the children on suitable cards, offering rich opportunities for a vast amount of general information in lively, natural conversation, *not* question-and-answer games. In all these exercises it is essential that the child should be led to method in his work. In the study of single objects the pupil first furnishes descriptions in clay and drawings, and in some cases in paper or wood, and then is led to systematic verbal description, applying his senses

in regular order and subjecting the object to a series of methodical experiments. He keeps a regular record of wind and weather, noticing the direction of the wind, the state of the atmosphere, the character of the clouds, observing the position and motions of the sun, moon and stars, studying the flow and pressure of water, the pressure of the air, simple electric and magnetic phenomena, the growth of plants from "seeds to harvest," the development of the frog, of the silk-moth, etc., and furnishing in all cases clear, concise and methodical oral and written accounts of the work.

It will be seen what an important part language plays in this, and how readily special, methodical language exercises will branch out from this work. From collections of things, etc., it is but a short step to the collection of the names of things, names of qualities, of actions, etc.; where writing and reading serve a truly practical purpose. In the records of observations, of current events, the same is the case. Conversations, descriptions, accounts of events are reproduced orally and fixed in writing. Soon the child will learn to take an interest in the language forms as such, and will learn to form words from their elements, to build sentences with, given material and in accordance with given plans, to analyze words into their component sounds and to classify them, etc.

An important phase of education, unfortunately much neglected, is the culture and methodical training of social insight and social virtues. This may be done by a systematic attention to current events in the school and home, in the village, the city and country; the keeping of records, the discovery of the causes and consequences of certain events, etc.—all leading to history and political geography, as the study of things and phenomena leads to natural history and physical geography. The work by groups of children at the La Porte group-tables, reveals to the children the value and desirability of common effort, both in the conception and execution of enterprises lying beyond the powers of one individual, the regular appointments of committees of helpers in various directions of the school-work, has a similar tendency and establishes a healthy *esprit de corps*. The estab-

lishment of school-gardens by the children, however limited may be the facilities, has an excellent effect in similar directions. The joint and continuous decoration of the room with reference to the seasons, the character of the work in hand, or looking towards certain festivals, is of incalculable value and imparts a new zest to all that may be done at other times. At La Porte, there are five festivals: the fall (or harvest) festival in October, the Christmas festival, the patriotic festival in February, the spring (or flower) festival in April, and the closing festival in June.

Much remains to be done in all these directions. The shortcomings of our own education and habits as teachers, the short-sighted views and tendencies of sluggish and worldly-minded communities, the limitations and hinderances thrown in the way of the school by a narrow partisan spirit in politics and religion, are appalling impediments in the way of progress; but modest striving will, in due time, overcome them all.

PEN-PICTURES OF THE QUINCY SCHOOLS—II.

VICTOR C. ALDERSON, DUBLIN, IND.

LET us travel in thought once more to the Coddington School in the granite town of Quincy. We are ushered into a room to see a lesson on "mud," as some critics have facetiously called moulding in sand. Before us is the original moulding-board, so made as to be elevated and viewed by the whole school. Each child has a small tin moulding-pan with sufficient moistened sand to make a small map.

"Who would like to make the large map and will promise to make a very nice one?" asked the teacher patronizingly. Words fail to express with half the force that the flutter of hands did that this was a decided honor. Two boys, with no less enthusiasm but probably with more skill than their classmates, are chosen and come proudly forward as "the elect." "Let me see who can make a very nice map of North America and not forget that the Rocky Mountains must be higher than the Alleghanies, and Lake Superior larger than Lake Ontario." With this caution,

the fingers of three score boys and girls are engaged in making as many scientific mud pies, for moulding in sand is only a modernizing of the old-fashioned mud pies of our fathers. The watchful teacher and trainer are now, as at all other times, seeking to make each child surpass all previous endeavors. "Be careful that the mouth of the St. Lawrence is not too large, and don't place Newfoundland too far from the shore." "Don't make Cape Cod too long." "The Middle States are flat, so don't leave any mountains there," are among the reminders to the little workers. In a remarkably short time the heaps of sand, formerly an incoherent mass, are converted into veritable relief maps. Deftly does the teacher give a few last artistic touches here and there—a mountain made smaller, a river-bed larger, or a little of the coast line cut off.

A recitation on the map is now in order. "Why are the rivers on the east side of the Alleghanies shorter than those on the west?" Everybody knows; they can see the answer on the maps before them, and the teacher's task is not to search for some idle fellow of whom she can make an example by displaying his ignorance, but the far harder task of deciding whose patience will last no longer. "Why is the Mississippi River so long?" Why do New York, Chicago, San Francisco, and New Orleans enjoy excellent commercial advantages?" The whole lesson smacks of thought and reason, and not of a stereotyped form taken from a text-book, for in every answer can be observed the effect of having seen, felt, yes modeled the object talked about. To these children North America was a tangible object and not a few colors daubed upon a sheet of paper and politely termed a map. 'Tis but a short step from the right to the wrong method, yet 'tis a touch "that makes the whole world kin" and converts a method radically bad to one supremely beautiful.

The zenith of delight, however, is yet to be seen. Invited to an adjoining room we are treated to a scene characteristic of the New Education in originality, plan, and execution. The work of the week is nearly done; children and teacher are alike weary, but a clear apprehension of child-nature has led the teacher to provide for the emergency. A pile of clay has been prepared

for modeling. As clay modelling is always a fascinating sport to the children, the early work of the afternoon has gone on with uncommon spirit. Anticipation of the delightful sport in the near future has made every mind, even the most sluggish, keenly alert. At length the regular work is done, books are placed aside, and all are in position. A small lump of clay is placed on each desk and every hand is eager to begin, but not a motion is made till all are supplied, when, at a given signal, fifty clay spheres are in process of manufacture. Round and round the hands and fingers work to the tune of,—

“Roll the hands, roll the hands so slowly
As slowly as can be;
Roll the hands, roll the hands so slowly,
And make a ball for me.”

In a few moments every child has made a sphere, some a trifle lop-sided to be sure, yet by far the larger part are as perfect as finger-craft can make them. At this juncture all seem doubly anxious to exhibit their work. An approving nod from the teacher satisfies them and they at once begin a new task. A few glances, only, from the observer suffice to show that the most adept are flattening the opposite sides of their spheres and rough cubes are coming into view. Soon the whole class are engaged in converting their former perfect spheres into cubes. The skillful little fingers are bringing the edges to a straight line, the corners to a sharp point, and all the faces equal. When this work is done another approving nod is sought from the teacher who, all the time assisted by the trainer, is gliding noiselessly about giving an encouraging word here, a reminder there, or touch of her delicate finger to help point a refractory corner. Meanwhile the children, intent upon their work, busy as bees, are all unconscious that time is flying. Soon the cubes are laid beneath their little hands and rolled over and over, on four sides only, till they become elongated and a cylinder results.

In these few minutes the children have learned, far better than even their nimble pens can tell, the essential features of the most important solids. But this is not all—rather a prelude, only, to the real work in hand, which is to model objects of their own selection. “Robert, what will you make?” “A hat,” he re-

plies. "John?"—"A sled." "Alice?"—"A pear," and so on, each child choosing an object which he or she desires to make, and in a trice the "Busy Workers" are engrossed in their own peculiar tasks. Not long do we have to wait ere the skeletons of numerous sleds, hats, dolls, pears and apples are in process of construction and one by one finished. Then a look of satisfied ability, and joy of having done a good work, flits across each face. A kind word of approval comes from the teacher, and the work of the week is done.

What is taught in this delightful manner, combining interest, zeal, pleasure, and real instruction? A host of useful gifts—form, magnitude, agility with the fingers, cultivation of the sense of sight and touch, basis of sculpture, drawing, industrial Education and geometry—all in the garb of play.

Apropos of the subject a word may be said in conclusion, and only a word is needed, to show how these teachers, already so famous, have gained such remarkable success. Not as blind imitators, not as servile followers of a fixed method, do they work, but as independent searchers in the field of childhood. A knowledge of psychology and human nature, in their reduced forms of child-mind and child-nature, lie at the foundation of their success. If education, as we are told, till we are weary, is a "leading forth" of the child's powers, or a "creation of power," then no teacher can possibly bring forth aright these latent powers and produce a well-balanced mind from the possibilities of childhood, who does not clearly and fully comprehend the phases of mental action and the development of mind power from its untrained state in childhood to its full equipment in the adult. Attempting to instruct the young mind without understanding its mode of action is like playing Hamlet with Hamlet left out, and is certain, sooner or later, to end disastrously.

A Bible and a newspaper in every house, a good school in every district—all studied and appreciated as they merit—are the principal support of virtue, morality, and civil liberty.—*Franklin.*

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School]

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THE QUALITIES OF GOOD ORAL READING.

GOOD reading conveys the thought with the least expenditure of force to speaker and hearer. It is, to use Curry's words, intelligent and expressive. We may apply Herbert Spencer's principle of economy of effort to both reader and listener. The words and expression should fit the thought as a glove fits the hand. All ranting, mouthing, squeaking through the nose, growling in chest tones, croaking and snorting violate the principle of economy for reader and listener. Reading is intelligent when the reader himself thinks the thoughts he reads, clearly and effectively, and also adapts them to the pre-existent state of his hearer's mind. It is expressive when it does these *two* things with no waste of energy to himself or hearer, and when it also *pleases*, by its intonations and cadences, the ear it addresses.

The conditions of good oral reading are three: 1. Power of thought to master the discourse read. 2. A trained voice. 3. Power of adapting the voice to both thought and hearer. All of these conditions require, not merely practice, but systematic drill. Each one should have its own special set of exercises. It is a mistake to always jumble together training in silent reading, voice-culture and expression. The skilled teacher of music or gymnastics divides his work into its elements and practices his pupil on one of them at a time, finally combining all of them into the finished execution. What person who has learned music does not remember the days, weeks, and, may be, months spent on time, or melody, or harmony, before he was allowed to combine all of them into one complete production!

There ought, therefore, to be much thought-analysis. Some of it should be of that painstaking kind that, to use Chas. Lamb's phrase, paws over every word, sentence, and clause, and rounds out and completes every idea. But too much of this ends in sickening disgust never to be recovered from this side of the grave. So, we must be careful not to induce that fatal disgust,

which forever puts an end to painstaking analysis of what we read. The way to learn to analyze and comprehend is to do much analyzing and comprehending. Let the work go along with a free swing, untrammelled by too much attention to minutiae. But little by little the lines can be tightened and the analysis made more thorough until thorough analysis and comprehension become the pupil's habit of mind.

The voice of most mortals needs much cultivation. The people who grunt, growl, hiss and make other disagreeable and ear-splitting noises are in the majority. Nothing can take the place of voice-drill on vowels and consonants—the elements of speech. We have had all sorts of jim-crack devices in the last few years, intended to take the place of vocal drill, but they are all failures. The voice must have *purity* ironed into it by drill on the pure tones of the long vowels; *distinctness*, by tables of consonant words and sounds; *correctness* of pronunciation by dictionary drill; and *pitch, force, quality, speed, volume*, etc., by drill on proper examples. Demosthenes' secret of oratory—action! action! action!—is properly paraphrased into drill! drill! drill!

The third element is much harder to get than either of the others. It is the free adaptation of the voice to the expression of what is thought by the mind. All the teacher can do is to furnish opportunity to his pupil to read and then criticise judiciously. Dogberry was much nearer right than he has received credit for: to read well does come by nature, but of course practice does much to help out natural qualities. If the comprehension element and voice-training have been well done, the reader will correct himself of his deficiencies by practice under suggestion.

FRESH ILLUSTRATIONS.

CHILDREN appreciate freshness and variety of illustrations. Many teachers' illustrations are like a well-known superintendent's school-prayer: he has prayed the same thing so long that his pupils all have it by heart and could rattle it off far quicker than he can. College boys always have a fund of jokes about their professors who have a stereotyped set of illustrations. At

a certain turn in the recitation, or in the subject, the professor introduced the illustration of the crumbling and decaying tower; at another turn the illustration of the caper Dido cut to outwit the Carthagenians; and at another the saying of Archimides that, if he had a fulcrum for his lever, he could move the world. Year in and year out, through thick and thin, these time-honored illustrations do duty for successive classes. They even cease to provoke a joke and settle down to the dignity of fixed traditions.

Common-school teachers are even more poverty-stricken in illustrations than the college dons. They very often conclude that they will not be "stuck up" about it, and that the illustrations of the text-book are plenty good enough for them. So the poor pupil receives second hand meat and drink in the text-book he studies, and then has to submit to warming the same over when he comes to the class, at the hands of the teacher. A little energy would supply the teacher with a new and fresh set of illustrations and examples, and thereby add a hundred-fold to the freshness and interest of the subject to the pupil.

There are hundreds of teachers who never go outside of White's Arithmetic (if they use it) for illustrations in factoring, least common multiple, greatest common divisor, fractions, etc. They are content with the illustrations in Harper's Geography (if they use it), and introduce their pupils to nothing new, or fresh. Text-books, with this method of use, become sermon-books of the sleep-producing kind.

It pays to own a set of reference books in the various subjects, such as will furnish abundant new and varied matter, supplementary to the class text-book. Thus, if the teacher could own a couple or three good arithmetics, besides the one used in the class, a geography or two, and some extra books of other kinds, and if good use were made of them, her work would be greatly improved. Even a moderate outfit of this kind would cost a neat little sum of money, but one can not afford to be without such necessary utensils. They are to successful teaching what a good kit of tools is to the carpenter or blacksmith, and as the carpenter and smith buy and own their tools, if they are not furnished by their employer, so will the teacher find it profitable to buy

and own these necessary tools of the school room, if they are not furnished by the district.

The use of these helps is like new sunshine in the day. They act on the pupil and the recitation, and react on the teacher herself, who will get broader views of what she is to teach and have more power of interest and inspiration. Need we wonder that our pupils yawn, get sleepy and seek relief in mischief when we run the same gamut of illustrations and examples that they, perhaps, have been familiar with since childhood and have seen every time they opened the book since they first owned it! So long as causes produce results, and one set of conditions superinduces another will this method of work result disastrously to good teaching. The craving for variety was implanted in the human soul long before schools and school-masters came into vogue, and hence antedates all the devices of the school-master. Old and young alike must and will have variety, all apparent exceptions to the contrary notwithstanding

LIGHTENING A TASK.

CONFINING a class to one little reading book makes it no easy matter to keep up a lively interest. If we stop to think about it, the ordinary school-reader, below the fourth, contains less reading matter, counted word for word, than the Saturday edition of any good daily paper, as the *Chicago Tribune*, *New York World*, or *Boston Herald*. That is to say, a book on which the pupil is to be confined for at least one school-year, actually contains fewer words than the morning paper, or even the weekly newspaper, the child's father dispatches in twenty minutes! And yet we expect our little wriggling, emotional, capricious young American to be interested in his reader not twenty minutes or even twenty days, but a whole year!

The *pater familias* is much more capable of restriction to one copy of his favorite weekly or daily than his child is to one little book, and yet he tires of his paper, at the outside, in less than half a dozen hours. There is a world of suggestion in these facts. They point the way to the cause of so much parrot-like reading,

done in sing-song monotony, and closed by a sigh of relief that would find fit expression in something like "The Lord be praised that I am done with that dog-eared old lesson!" Lack-luster eye and sagging lower jaw take their origin in that flabbiness of interest consequent on threshing the same two bushels of chaff the hundredth time.

The cure is greater quantity and greater variety of matter for all reading pupils who are not engaged in learning words preparatory to reading. Now-a-days youths' and children's magazines are plentiful and cheap. Besides, many secular and religious newspapers contain copious departments which abound in good selections for children and youth. Ways and means may be devised to make these available in the reading-classes above the First Reader. Papers like *Saint Nicholas*, *Wide-Awake*, *Harper's Young People*, and *Youth's Companion* furnish matter of the best quality for the supplementary reading suggested.

The idea that everything read must be read into tatters and fragments before it is left, is a mistake. Some selections ought to be done to a finish. But, on the other hand, much reading should be done at a good round pace, care being taken that what is read is read correctly and well understood. Much that is in the ordinary readers would be better disposed of in that way. One can hardly see why "Casabianca," "The Pet Raccoon," and "Dan's Bull Fight" should be elevated to the dignity of the Sermon on the Mount or Whipple's Contrast between Wit and Humor.

If three copies of any selection are forthcoming, class-reading in the off-hand way previously suggested becomes easy. The teacher keeps one to look over in order to insure correctness and to be able to give the necessary aid. The other two are held by pupils, and, while one member of the class stands and reads, another member looks over the next part preparatory to reading. In this way the work goes right along without stumbling. A question here and there to the others will keep them sufficiently on the alert.

Very few school-districts are so poor in papers, but that a little energy and inquiry will secure a sufficient number to lighten the work of the reading-classes, besides giving drill in a kind of reading now much neglected—off-hand reading.

• *WANT OF AIM.*

"WONDER what our teacher was driving at in that recitation?" is often the query among larger pupils. The recitations are aimless and the pupils feel it, though, perhaps, they could not tell exactly what the matter is. The teacher flounders, asks the same question half a dozen times, makes the pupils nervous, gets nervous himself and runs amuck generally. Surcease from such sorrow is usually found in the teacher's lecturing to his little pitchers, on the subject they are imagined to be studying. With larger pupils, the next thing one is likely hear is, "Well! teacher talks *beautifully*, doesn't he!"

Aim, definite aim, is the thing to be prayed for in such cases. The pupils are like a flock of ill-herded sheep whose shepherd can do nothing more than hurry them over the pasture, snipping a bit here and there, trampling much good food under foot, with no definite place in view, and becoming hungrier and more demoralized at every step. Aimless teaching is worse than herding children on a subject, for, if they were herded on it, they would get something out of it for themselves, whereas they are prevented from even that.

Definite aim is one of the lights the teacher must set perpetually in his eye. It applies to a great many things: the subject itself, each lesson, each part of each lesson, and even each question and illustration. What is Arithmetic taught for? Geography? History? Spelling? Writing? Each of these is really a double question. Training is one thing and information another, though, perhaps, if the teacher would answer the question, What am I going to make my pupil able to do? he would meet the need well enough.

It is plain that the blunderbuss-plan of random effort, trusting to inspiration and Providence, to turn teacher and pupil both in the right direction, will not do. It is too much of a lottery, blanks being the rule and scattering prizes the exception.

Before beginning to teach any subject the teacher ought to settle definitely certain points. How much of the subject and what parts of it am I going to teach? What ideas are very im-

portant and should be emphasized? What are unimportant and may be touched lightly?

A similar catechism is needed at the approach to every lesson. Not only this, but like care is needed in assigning lessons. "Take the next page" is like saying to a man who wants to know the road to Indianapolis, "Take the first four roads." Lessons often go bobbing because the pupils do not know what to do. An invitation to take the next chapter is an invocation to idleness and want of preparation. If the pupil can take the next chapter and do it habitually, he does not need a teacher in that subject, since he is held responsible for going alone.

Vagueness in one place begets complementary vagueness in another, and the last devil of aimless work in the school-room will find seven others to keep him merry company.

It is not the purpose of this paragraph to cook up a recipe, with specific directions for all sorts of aims, since this is utterly impossible, hence this word to the wise will be sufficient.

VOICES FOR THE SPEECHLESS.

Now that teachers are generally trying to cultivate kindness to animals, the editor of this department desires to call attention to a little book of selections entitled "Voices for the Speechless," made up of good pieces of prose and poetry (mostly poetry) relating to kindness to the dumb creation. All teachers who are interested in kindness to animals (and all ought to be!) will be delighted by this little book. It is entirely free from the good-for-nothing trash so often found in such collections. The compiler is Mr. Abraham Firth, Sec'y of the American Humane Association, and its compilation was a work of love, designed to put the best short extracts in the English tongue, on humanness, into the hands of the children of the public schools. Opening the pages at random one lights on such authors as Frances Power Cobbe, Dickens, Ruskin, Shakespeare, Dean Stanley, Arthur Helps, and George Eliot. Such names are an earnest of the high type of the matter. Nor is it too difficult and thus unsuited to the understanding of children, but on the contrary the

selections are made with a view to what average children and young people can understand. The extracts are suitable for memorizing and recitation in most grades and kinds of schools. When teachers have recitations, they could serve a good cause by devoting part of the matter to the rights of our poor dumb animals. We believe the cost is 75 cts., and Houghton, Mifflin & Co., Boston, are the publishers.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

A BOOK FOR GEOGRAPHY WORK.

SECOND YEAR GRADE.

I N the geography work of the second year of school the aim is to thoroughly interest the pupils in the various typical regions of the earth, as the cold regions, the warm regions, the mountainous regions, the regions of the plains, the land regions, the water regions, etc. This interest is to be aroused indirectly. That is, the pupils are to be interested in the tropical regions by studying the plants, animals and people of that region, and the portion of earth as region is to solicit and hold their interest and attention because it is the home of these plants, animals and people, in whose habits the children are so deeply interested. In doing this work the map is not to be employed. The map is to be used when beginning the regular text-book work, about the beginning of the fourth year's work. A little previous to this time the idea of the map should be first presented, in order that the child may understand it as an instrument, when about to enter upon text-book work. That is, the time to give the idea of the map, and to make the child a master of it as a means of geographical study, is at about the beginning of the fourth year instead of during the second year. According to this, the most rational method is not (1) to study the school-room and its furniture and map it, (2) to study the school-yard and map it, (3) to

study the features of the township and map it, etc., during the first part of the geography work. On the other hand, certain geographical ideas are to be studied during the first three years without a study of, or the aid of the map, but by means of conversation, stories, pictures, readings, etc., at the end of which work, these steps with the school-room, school-yard, township, etc., may be taken as a means of giving the child an idea of the map. The principle is—utilize the means that the child is already familiar with, i. e., *language* and *pictures*, in giving the first ideas of geography, in order that the whole force of the mind may be turned upon the ideas and their relations. (The geographical ideas for the first year were suggested in the November Journal, and those for the second year in the December Journal. The work of the third year will be sketched at a future time.)

It is the intention at this time to speak of a book that is deemed suitable for reading and conversational exercises in the second year geography work. It is a book familiar to many teachers of the state. Its title is *The Seven Little Sisters*. The book contains about 130 pp., printed in large type and simple language. Published by Lee & Shepard, Boston. Price 50 cts.

The idea of the conditions under which the geographical story is to be told is that of a lady seated with her three little friends, *Marnie*, *Bell*, and *Geordie*, and telling to them a series of interesting things about "The Seven Little Sisters, who live on The Round Ball that Floats in the Air."

The idea of the book is to convey to the children some of the salient notions of the form and size of the earth; of its varieties of surface and climate; of its various plants, animals, people and their habits, by grouping these ideas around the doings and daily life of seven little girls—each forming the nucleus of a picture of some typical region. The ideas of the *universal brotherhood* of the inhabitants of the earth, and of man as a *being of exchange* are also touched upon. The general plan of the book is—

1. To consider in a simple way the ball itself in its main features, as form, size, floating in the air surrounded by white clouds; and its varieties of surface, as the grassy, hilly, rocky, and icy regions.

The following indicates the manner of presenting this, and is also an index to the general nature of the language:

"Dear children, I have heard of a wonderful ball, which floats in the sweet, blue air, and has little soft, white clouds about it, as it swims along. There are many charming and astonishing things to be told of this ball; and some of them you shall hear.

In the first place, you must know that it is a very big ball; far bigger than the great soft ball, of bright colors, that little Charley plays with on the floor,—yes, indeed, and bigger than Cousin Frankie's largest foot ball, that he brought home from college in the spring; bigger, too, than that fine round globe in the school-room, that Emma turns about so carefully, while she twists her bright face all into wrinkles as she searches for Afghanistan or the Bosphorus Straits. Long names, indeed; they sound quite grand from her little mouth, but they mean nothing to you and me now.

Let me tell you about *my* ball. It is so large that trees can grow on it, and men and women can live on it, and little children too. In some places it is soft and green, like the meadow between the hills, where the grass was so high last summer that we almost lost Marnie when she lay down to roll in it; then again it is steep and rough, covered with great hills, much higher than that high one behind the school-house,—so high that when you look up ever so far you can't see the top of them; but in some parts there are no hills at all, and quiet little ponds of blue water, where the white water-lilies grow, and silvery fishes play among their long stems. Bell knows, for she has been among the lilies in a boat, with papa," etc.

2. The book then proceeds to set forth some of the principal and most interesting features of the *warm regions* of the western world by clustering them around a story of "The Little Brown Baby"—the youngest of the seven sisters. In the course of this little narrative, the dress and mode of life of the people; vegetation, as the tall grasses and the cocoanut; animals, as the golden colored snakes, monkeys with prehensile tails, and green parrots, are touched upon. All these in connection with pictures may form the basis of lessons in which the geographical ideas of the children may be extended, their imagination cultivated, and their power of language strengthened.

3. The story then changes, and Agoonack, the second of the seven sisters comes upon the scene. In this story the children are told of Agoonack's brother Sip-su, and of her father and mother, of their occupations, and of what they eat, drink, and

wear. Their home is described, and much that is interesting concerning the animals of the region, as the seal, walrus, polar bear, whale, and the arctic dogs is given. How Agoonack lives "through the long darkness" and how she "lives through the long sunshine" is set forth in a manner that is vivid, interesting, and appropriate to children.

4. The children take then, in imagination, a long journey, over lake and river, mountain, plain, and ocean, in order that they may look in upon the third of the "Seven Little Sisters," in her burning desert home. This sister is "Gemila, the Child of the Desert." It is a story of desert life, of burning sands, of the camel, ostrich, oasis, and lonely caravan. It begins thus:—

"It is almost sunset, and Abdel Hassan has come out to the door of his tent to enjoy the breeze, which is growing cooler after the day's terrible heat. The round, red sun hangs low over the sand; it will be gone in five minutes more. The tent door is turned away from the sun, and Abdel Hassan sees only the rosy glow of its light on the hills in the distance, which looked so purple all day. He sits very still, and his earnest eyes are fixed on those distant hills. He does not move or speak when the tent-door is again pushed aside, and his two children, Alee and Gemila, come out with their little mats and seat themselves also on the sand. He only sends up blue circles of smoke from his long pipe as he sits there, cross-legged on a mat of rich carpet. He never sat in a chair in his life, and indeed never saw one. His chairs are mats, and his house, as you have heard, a tent. Do you know what a tent is? I have always liked tents, and" etc.

5. The book then turns to another typical phase of the earth's features and life, and centers the events around the daily life of "Jeannette the Little Mountain Maiden," and for a time the pupils live in Switzerland, wandering over mountain and valley, leaping across little mountain torrents, viewing the chamois upon the high rocks, picking the "blue-eyed gentians," and gathering berries and chestnuts.

6. The children then watch the sunset. "Now a little part of the sun is gone—now it is half gone, and in a minute more it is entirely out of sight, leaving only a train of bright clouds behind. Where did it go?"

It seemed to slip down over the edge of the world. To-morrow morning, if you are up early, you will see it come back

again on the other side. As it goes away from us to-night, it is coming to another sister, little Pen-se, who lives far away, round on the other side of the world. While we had the sunshine she had the night; and now, when night is coming to us, it is morning for her.

The sun has gone; shall we go too, and take a peep round there to see the kind of morning Pen-se and her father Kang-hy are having?"

Thus are brought before them, the various grades of life in China, the rice fields, the tea plantations, the mulberry groves, life upon the boats in the rivers, what the people wear, what they eat, and the chief characteristics of the "Flowery Kingdom" that are within the comprehension of children. The following as to what they eat will indicate the general nature of the narrative:—

"What will all these busy people have for dinner to-day? Fat bear's-paws, brought from the dark forest fifty miles away—these will do for that comfortable looking mandarin with the red ball on the top of his cap. I think he has eaten something of the same kind before. A bird's-nest soup for my lady in the great house on the hill; bird's-nests brought from the rocks where the waves dash and the birds feel themselves very safe; but 'such delicious soup!' said Madam Faw Choo; and Young-lo, her son, sent the fisherman again to the rocks for more. What will the soldiers have,—the officer who wears thick satin boots, and doesn't look much like fighting in his gay silk dress? A stew of fat puppies for him, and only boiled rats for the porter who carries the heavy tea boxes," etc.

7. The story next deals with the life of little Manenko in Africa, and with the wonders of the "Dark Continent"—the strange vegetation, the large and wild animals, the elephant hunt, and with the alligators and the hippopotami in their homes. The children are told of the simple but happy life of the people—of what they eat—the pounded corn, milk and honey, scarlet beans, and antelope and elephant meat; and of wild birds—the white pelicans, brown ducks, and the honey-bird. All new and wonderful and wild.

8. And now they are ready for the story of the seventh of the "Seven Little Sisters"—Louise, the Child of the River Rhine. At first it is a typical German household in the fatherland, and a story of a German home upon the Rhine—the home of Louise

and Fritz, Gretchen and baby Hans. German scenery and climate are touched upon, and German habits and occupations. Then misfortune comes and the father tells "his wondering little ones" that he has lost all his money; the beautiful great house and gardens are no longer his; and they must all leave their pleasant home near the Rhine, and cross the great tossing ocean, to find a new home among the forests or prairies. Thus are they introduced to life in the West, as they learn about Louise in the home of the sturdy German farmer of the frontier.

9. The last section of the book is devoted to showing that although some of these little sisters are white, some black, and some brown; although some live in cold regions and some in warm, some in desert regions and some upon mountains, yet they are in reality *sisters*,—that it is a common Father "that made the sparkling water and sunshine for Pen-se, and the shining brown ducks for her too; the springs in the desert and the palm-trees for Gemila, as well as the warm sunshine for Manenko, and the beautiful river Rhine for Louise; the colored parrots for the Brown Baby; the red strawberries and the chestnuts for little Jeannette to gather; and the grand march of the northern lights for Agoonack."

NUMBER—FIRST YEAR.

AS HAS been said, the first year's work in number consists of two parts. The first part deals more particularly with form (number being incidental), and occupies the first three months of the school year. The second part deals with the ideas of number through the different forms studied. Thus in studying three as to its relations, the class should use squares, cubes, circles, triangles, oblongs, spheres, hemispheres, cylinders, cones, pyramids, prisms, semicircles, spheroids.

Why use so many different kinds of objects? Because each time the child discovers a relation with the balls as a means, and verifies the truth of the relation with cubes, squares, cones, etc., etc., every added group carries the fact farther away from the particular and nearer to the general. The mind establishes a general truth through particulars. Then, too, repetition of the

same fact as found in all the different groups impresses the fact upon the mind.

Why use these forms which should have become familiar in the first three month's work in form? These simple forms are themselves universals. What does the cylinder represent? It represents every object in the material world which is similar in form. A cylinder represents a log, a cane, a pin, the spoke in a wheel, a flute, a stem of a leaf, a telegraph pole, a thread, a wire, a hair, the trunk of a tree, the arms, the fingers, the boiler of an engine, a lamp chimney, an oil tank, and hundreds of other things. The child who is able to gather all these objects into a group and name them all cylinders, has ten-fold more power than the one who can only say this is a pin, that is a tree, etc.

Suppose that the pupils have studied the solids and plane surfaces, can distinguish, name, describe, draw, and mold them and like forms, they are ready to study number in some systematic way. In the study of any number the following order may be observed:—

1. Study the number as a whole.
2. As to the relations in it.
3. In its applications.

The idea of a number and its oral term must of necessity be involved in the study of any number as a whole. The idea *one* and the term are familiar to the pupils.

With clay let each make a sphere, then with a fine wire or thread cut each sphere into equal parts. Ask what has been done, what the parts are called, how many parts there are? Hide one part and tell how many are left, hide both and tell how many are left, place both hemispheres together and tell what is made, tell the names of equal parts of the sphere. Let the children tell stories about the sphere and its hemispheres. These stories should not be suggested by the teacher, but should be the result of the child's own thought. If at the first attempt he discovers nothing, no time has been lost if he has *tried to think*. After handling the sphere and its parts some relations such as the following will suggest themselves:—

1 hemisphere and 1 hemisphere are 1 sphere.

2 hemispheres are 1 sphere.

A sphere less 1 hemisphere is 1 hemisphere.

A sphere less 2 hemispheres is nothing.

In a sphere there are 2 hemispheres.

A hemisphere is the half of a sphere.

The clay sphere may be called an apple, and the pupils will find that there are two halves in an apple. The clay sphere may represent an orange, a peach, a potato, etc., and the child has taken the first steps in discovering that there are two halves in everything. For convenience, and also for greater exactness, he may use the dime and half dimes, the dollar and half dollars. He is ready to learn that:—

2 half dimes are 1 dime.

2 half dollars are 1 dollar.

2 pints are 1 quart.

A sheet folded into 2 halves is a folio.

2 one cents are 2 cents.

2 reams are 1 bundle.

Arrange cubes, cylinders, cones, etc., in two's. What leaves grow in two's? What insects have two wings? What are your two mittens called? What are your two shoes called? What things are bought in pairs? What articles of clothing, what instruments? How many pairs of wheels has a dog cart, a farmer's wagon, a freight car, an engine? What little animal has two pairs of horns? How many pairs of legs has an ant, a fly, a butterfly, a spider, a horse? What animals have the hoof divided into two parts? What animal has double hoofs?

Place a double row of pegs on the desk. Examine the cloaks and see whose has a double lining. Two horses driven together are called what? two oxen driven together are called what?

Thus the child may learn the meaning of the terms *pair*, *span*, *yoke*, *double*, *couple*, *duet*, etc. The knowledge of two serves as a basis for the knowledge of three. Three is two and one. Find all the threes in the room, in the yard. Bring a plant from the yard whose leaves are in threes. What flower has its petals arranged in threes? (See Sir John Lubbock's work *On Leaves*.) What bird has three toes? Explain the terms *trio*, *triangle*,

triple, thrice. Give each pupil three objects, such as—three cubes, three circles, three triangles, three cones, etc., and let him experiment with them. After some thought the following relations may be stated: (These relations will be stated *concretely*.)

1 and 1 and 1 are 3.	3 less 1 are 2.
2 and 1 are 3.	3 less 2 are 1.
1 and 2 are 3.	3 less 3 are 0.
3 ones are 3.	3 less 1 less 1 less 1 are 0.
1 three is 3.	In 3 there are 3 ones.
2 ones and 1 are 3.	In 3 there is 1 three.
1 two and 1 are 3.	

As has been said before the teacher is *not* to suggest these relations, but is to encourage the pupil in his discoveries of them. The relations stated deal with three as a whole. The group may now be separated into its equal parts and the parts named. Show me 1 third of three cubes, 2 thirds of three cubes, 3 thirds of three cubes, etc., etc. The applications are:—

1. Three feet are 1 yard.
2. Three feet are 1 pace.
3. Three miles are 1 league.
4. Three 1 cents are 3 cents.

Enough time should be given to these facts to make them familiar. In dealing with the yard the pupil should have a definite idea of the yard as an exact measure, he should handle the yard measure, should measure the doors, table, wall, fence about the school yard, rolls of tape, bits of ribbon or string, etc. Have a box of toy money, and let different pupils "keep store," buying and selling goods by the yard. Parts of a yard, as a third or two-thirds may be bought, care being taken that the child sees each part in its relation to the whole.

It should be borne in mind that all the work thus far presented is to be presented *orally*, the lessons are to be conducted in such a manner that the ideas of number are made familiar, and there should be no *representation* except in the form of pictures. The teacher may ask her pupils to make a picture of the stories they know about three, using balls. It may be done in this way:—

- ● ● (To be read, 1 ball and 1 ball and 1 ball are 3 balls.)
- ● (Two balls and 1 ball are 3 balls.)
- ●● (One ball and 2 balls are 3 balls.)
- (One three-balls is 3 balls or 3 one-balls are 3 balls.)

FANNIE S. BURT.

THE SCHOOL ROOM.

[This Department is conducted by Geo. F. Bass, Supervising Prin. Indianapolis schools.]

MAKE YOURSELF USELESS.

SOME one said to a teacher once, "Make yourself useless to your pupils as soon as possible." At first thought, this seems to be strange advice; but on second thought, one sees sound philosophy in it. Pupils often depend entirely too much on the teacher, and he frequently and unconsciously helps them to their hurt. Instead of growing to be independent, they grow more and more dependent. Many a pupil goes through his grammar lesson by the help the teacher gives unconsciously in various ways. The writer very well remembers one of his teachers who was very useful to his pupils in the grammar lesson. To illustrate, take the following sentence: "Sugar is sweet." Parsing was the order. The pupil said, "*Sugar* is a prop——. Just here the teacher arched his eye-brows and said, "Tut, tut." The pupil said "common" before the teacher could possibly get his face straight. Why not? If it were not proper it must be common. He then said, "*Is sweet* is a verb, because asserts action, being, or state." The teacher then very blandly asked if *sweet* forms any part of the verb. Knowing the habit of the teacher better than he knew his grammar the pupil said, "No, Sir." The profound conclusion that *is* is the verb was then reached. Now the pupil knew, instinctively, that if *sweet* were a part of the verb, no remark would have been made. He ran no risk in saying that *is* is the verb, since *sugar* was disposed of and *sweet* did not belong to the verb.

But another trouble was ahead. That verb was either transitive or intransitive, and he did not know which. Two guesses would dispose of that, however, and he stood just as good a chance to guess right the first time as wrong. He said, "*Is* is a transitive verb." Then the teacher said, "Is it?" with that peculiar inflection that says it *isn't*. The pupil immediately changed his opinion and was not slow to say that *is* is intransitive. This teacher was of great use to the writer, especially in grammar. He could not get along without the teacher.

DON'T DO IT AGAIN.

Did you insert in your last examination a peculiarly worded problem, in a vain endeavor to give something unlike any thing the teacher had taught? When the pupils failed, did you say you were giving it as a test for bright pupils?

Did you ask a fifth year class questions in grammar that would puzzle a first year high school class? Did you say that you just wished to see what they would do with them?

Did you ask a geography question that could not be answered from what was in the text, and then claim that you did it to lead the teacher to do "broader work?"

Have you a course of study, and did you ask questions that called for knowledge not included in the course?

If you did many such things as the above, will you be surprised to find that your teachers have "heart-ache," and that they are trying to teach every possible kind of problem and every possible kind of side question that may be related to any thing they teach?

In short, will you be surprised to find them teaching in such a way as to give the pupils *power to pass*?

The above thoughts were suggested by a paragraph under "Short Notes," in the February number of the Journal, entitled "Them Sums."

W. G.

GRAMMAR.

A class is beginning the study of grammar from a text-book. Can the teacher get any help from his psychology? Let us see. Psychology says the mind proceeds from the known to the related unknown. Common sense, then, suggests to the teacher to ascertain what these pupils know that is related to that which he expects to teach them.

This book begins with the sentence. The definition is, "A sentence is the expression of a thought in words." Following this definition, are some groups of words. The pupil is asked to decide which are sentences. This takes a clear understanding of the definition. The pupil needs to know what the elements of a thought are, before he can tell whether a thought is expressed

or not. He has had and expressed many thoughts. The teacher, then, must appeal to this knowledge in his possession.

What is necessary to a thought? He can not answer this; it is too general. Can we think, unless we have something to think about? Any sane person of common sense will answer this in the negative. Must we know something to think about this object, before we can have a thought about it? Yes. Have we a thought before we think what we have in our mind about this object? No.

From such a conversation as this, the pupil can easily be led to see that in every thought there are three elements: the thing thought about; that which is thought about it, and the act of thinking. Now, when a group of words express these three things a sentence is formed. A pupil is now ready to take the exercise referred to? He knows now certain relations that exist between the words and the thought. The first in the list is "Flowers bloom." Here he can readily be led to see that the word *flowers*, names the thing thought about, and that *bloom* not only denotes an act, but shows that we have thought this act of *flowers*. A thought is expressed, and we therefore have a sentence. The teacher should be certain that the pupil sees that the words express all the elements of a thought, before concluding that they form a sentence.

The models for disposing of sentences, are usually the reverse of this. The one in the book before me, is as follows: "This is a *sentence*, because it expresses a thought." This has a tendency to make the pupil guess, and then give the "stock reason." Take "birds chirping," and four out of five will say, "This is a sentence, because it expresses a thought." When questioned closely, they see their mistake, and show their ability to think properly.

The pupil should recite in the order in which he did his thinking. Next comes the analysis of this sentence.

He is ready to point out subject, and predicate for this is what he has been doing in deciding whether these groups form sentences. He needs to learn that the word that denotes the thing thought of, is subject, and that the word or words that assert what is thought, are called predicate.

G. F. B.

SHORT NOTES.

TEACHERS OF HISTORY, do your pupils know as much about Morse, Morris and Charles Sumner, as they do of Melendez, De Leon and Cartier? Do you teach as much about Garrison, and Toombs, and Ben Wade, as you do of Frobisher, Sergeant Jasper, and Rochambeau? Your pupils know of the Gadsden purchase, but can they tell aught of the resumption of specie payments? They can describe in detail the battle of Long Island, but can they explain the questions involved in the Trent affair? While you are teaching your text-books, don't forget the many far more important items which the text-books omit.—*School Moderator.*

THE CATECHISM.

Teacher.—Use a form of *lie* or *lay* in a sentence.

Pupil—I have lain my books in my desk.

Tr.—What does *have lain* mean?

P.—*Have lain* means have rested.

Tr.—Could you say you have rested your book in the desk?

P.—No'm.

Tr.—What would you say?

P.—I have laid my book in my desk?

Tr.—That's right.

Whenever a mistake occurred, the pupil was taken through a similar catechism, which always resulted in the pupil's changing his sentence by using a form of the other verb. The pupils seemed to be anxious to please the teacher, and whenever they found what she wished, they were not slow in giving it. Just as we had made up our mind that if she would put a pupil who had made a correct sentence through the catechism, he would change as readily as the others had done, she did that very thing.

P.—I lay on the lounge yesterday.

Tr.—What does *lay* mean?

P.—*Lay* means rested.

Tr.—Would you say you rested on the lounge?

P.—No'm.

We were not surprised.

Moral.—Question pupils when they are right as well as when they are wrong.

LITTLE THINGS.

The little things in the school room have a greater effect on the school than many persons suspect. The order of the teacher's desk, and the pupils' desks; the condition of the school room floor, walls, black-boards, curtains; the temperature of the room; the teacher's voice and general manner, are things worthy of consideration by every teacher. He should examine himself frequently to see whether he is falling short of what he should be under the circumstances.

THE NUMBER TWO CLASS.

Don't make the pupils feel that it is a disgrace to be in the number two class. A pupil may be just as honest, and deserve just as much credit for being in this class as if he led the number one class. It sometimes happens that the best pupil in school deserves very little credit, because he has not worked very hard; but the poorest in "No. 2" may study very hard, and do his very best, and of course deserves great credit.

PRONUNCIATION.

Half the pupils say Miss-sippi, instead of Miss-iss ippi; and artic, instead of ark-tic; nom'tive, instead of nom-in ative; drowneded, instead of drowned; attackted instead of *attack*.

MAKING CHANGE.

A man hired 8 boys to work for him for a nickel a piece. When he came to pay them, he found that the least he had was a silver dollar. He went into a grocery to get change. He came out with ten pieces of money and paid the boys, without making further change. What were the ten pieces? Try your school on this.

QUERIES. 1. A merchant of Toledo, O., bought goods in New York at 20 cents a yard, and sold them at 40% net profit, after allowing his customers 12% discount off; what were the goods marked? 2. A servant was ordered to lay out equal sums of money for chickens, ducks, and turkeys, and to expend as little money as possible; he agreeing to forfeit 5 cents for every fowl purchased more than was necessary to obey orders. In the market he found chickens at 12 cents, ducks at 30 cents, and turkeys at two prices—75 and ninety cents—of which he took the cheaper; how much did he forfeit? 3. How much land in a square field whose diagonal is 49.947 rods.

OFFICIAL DEPARTMENT.

*RECENT DECISIONS OF THE SUPERINTENDENT OF
PUBLIC INSTRUCTION.*

TO A TOWN SCHOOL BOARD.

It is your duty to provide school houses for the children of your town, of sufficient size and equipment for their accommodation, as far as the resources of the town permit. Sec. 4444. If it is clear that your present accommodations are insufficient, it is the duty of the civil town board, on receiving the statement provided for in Sec. 4488 School Law, to authorize the issue of bonds for raising money for building. If the town board refuses to do this, for no sufficient reason, and the debt of the corporation is within the constitutional limit, the school board may proceed to build on credit, giving their notes for material furnished and work done, and the town will be bound thereby. Note 8 under Sec. 4441, School Law.

TO A COUNTY SUPERINTENDENT.

I think you are correct in your opinion that a school enrolling 110 pupils needs more than two teachers. If the means of the township will permit, this village ought to have three teachers. The trustee has the power to increase his revenues by a local levy, and I think it is his duty to exercise this power till every school is adequately supplied with competent teachers, for not less than six months each year.

TO A TOWNSHIP TRUSTEE.

While it is not permissible for a trustee to employ himself as a teacher (Note 5, under Section 4444, School Law), yet if a teacher is elected to the office of trustee he may properly continue to teach to the end of the term for which he was employed.

TO A COUNTY SUPERINTENDENT.

You state that your board of county commissioners find the accounts of a certain trustee, for expenditures in building a school house, excessive, in their opinion, to the amount of about \$300. You ask what course the board may pursue in the premises. Section 4441, R. S., requires the board to examine the annual report and accounts current and vouchers presented by the trustee, and, if satisfied that said accounts are just and true, to allow and pass the same; and such allowance shall have the effect to credit the trustee with such expenditures. If, therefore, the board find an account excessive in amount and decline to allow it or any part of it, the claim of the township remains against the trustee for the amount not allowed, and he is liable to a suit for such amount at any time after refusal to make settlement of the same. The board should act promptly in such cases.

TO A TOWNSHIP TRUSTEE.

A township trustee has no right to employ teachers for the school year which begins after he retires from office. The trustee who takes the office in April is not bound by contracts of his predecessors with teachers for the year beginning the subsequent July.

TO A CITY SCHOOL BOARD.

The school board of a town or city is the authority empowered by law to levy the special school tax, to be used in building school-houses, and the county commissioners have no jurisdiction over the subject in any way. See Notes 1, 2 and 3 under Sec. 4467, School Law. The town or city council has no authority over this special school tax. The school board should certify its levy to the county auditor, whose duty it then becomes to make the proper assessments upon his tax lists. See Sec. 4468, School Law. The authority of the city council is limited to the local tuition tax, authorized by Sec. 4469.

TO A CITY SCHOOL BOARD.

Section 4436, R. S., and all the Notes under it in the School Law, refer to the *county board of education*, and *cities* are expressly excepted from the jurisdiction of the county board, by the section itself. Therefore the matter of adoption and change of text-books for a city is entirely within the discretion of the city board under the general powers conferred by Sec. 4444, R. S.

TO A COUNTY SUPERINTENDENT.

I think the county superintendent has the right to refuse to license an applicant whom he knows, on reasonably positive evidence, to have frequently failed in governing schools, and whom he still deems incompetent in that respect.

A county superintendent may properly decline to grant a license to a person whom he knows to have been a failure in the school-room during the preceding year. Such action should, however, be taken upon very careful consideration, and the teacher should be given the benefit of the doubt.

TO A TEACHER.

The trustee has authority to permit the use of a school-house for public speaking, when not occupied for school purposes, i. e., of afternoons and evenings after school has been dismissed. When such permission is given, the trustee should require security from some responsible person that the building and property will not be injured and that the rooms will be left clean and in good condition. You are right in not permitting the use of the building unless ordered to do so by the trustee. In no case should the regular sessions of the school be interrupted for public meetings. Sec. 4510 and notes.

TO A CITY SUPERINTENDENT.

I think there is no doubt but the provision in Sec. 4497 regarding the German language, must, when applied to a city, be interpreted as requiring a petition from twenty-five patrons of each school (i. e. room) in which instruction in German is asked. The language of the law, you will notice, is "at *any school* of a township, town, or city."

TO A TOWNSHIP TRUSTEE.

The principal of a township graded school is occupied the greater part of the time in teaching, but also gives some time and labor to the supervision of the work of the other teachers of the school. His services as a teacher should be paid for from the tuition revenue, his services in supervising from the special school revenue. The trustee must determine as fairly as he can the proportionate amount to be paid from each revenue. See Note under Sec. 4445, School Law.

TO A COUNTY SUPERINTENDENT.

You are familiar with the opinions on "additional branches", cited in the School Law under Secs. 4497 and 4499. I think that a mandate would not lie against a township trusted, to compel him to have higher branches taught, unless a regular school meeting had ordered such instruction by a majority vote of all persons entitled to vote at the meeting. An incorporated town has no school meetings. I presume a mandate would lie against the school board if it could be shown that a reasonable number of pupils needed higher instruction.

An incorporated town is required to conform as nearly as practicable to the county adoption of text-books. If the town board resolves that it is not practicable to use certain books adopted by the county board, that action will be final.

The county board can not compel teachers of a town to attend the township institutes, but the town board may require them to do so; that is, each town board may require its own teachers to attend the institutes.

TO A TOWN SCHOOL BOARD.

When a village becomes an incorporated town, the school privileges of the children must not be disturbed for the time being, but any who are outside the new corporation and wish to continue to use its schools, must be transferred to it at the next annual enumeration.

If children living outside the corporation and not transferred have been enumerated by the trustees thereof, and have actually attended the school, I do not think the court in equity would refund to the township the school revenue drawn on such enumeration.

TO A CITY SUPERINTENDENT.

The public schools are established and maintained for the benefit of the many, and it is the duty of the school authorities to protect in every way possible the health and morals of the children entrusted to their care for so many hours every day.

Therefore, any individual pupil whose presence in a school is clearly a disadvantage to the work of the school or the welfare of the pupils, especially if his influence is vicious and his conduct towards the female pupils objectionable, should be promptly excluded from the school.

You are not bound to keep the boy you mentioned in the school, but on the contrary he ought to be excluded. No individual whose pres-

ence is a detriment to the other pupils, through physical conditions or vicious tendencies or immoral influence, should be permitted to remain in the school.

TO A SCHOOL TRUSTEE.

School trustees of townships, towns and cities, have the power to prescribe and enforce a course of study, and they may suspend from school pupils who without sufficient reason or excuse refuse to pursue the studies for which their advancement qualifies them. This power should be exercised with great prudence.

TO A COUNTY SUPERINTENDENT.

On the incorporation of a town, the newly appointed school board should receive from the township trustee the amount of State's tuition revenue represented by the number of children attending the school of the town, and the local tuition and special school revenues should be divided on a basis of the value of taxable property, as nearly as can be estimated.

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

DOES THIS MEAN YOU?—When you subscribed for the Journal, and was granted time in which to pay, was it not distinctly understood that you would pay not later than January 1, 1887? A few persons have forgotten either the understanding or the date.

EXAMINATION FOR STATE LICENSE.—In last month's Journal a mistake was made in naming the topics upon which examinations would be required on the last Saturday of March. The word GRAMMAR should be substituted for German. German is not required. See Official Department of last month, page 108, for full particulars in regard to State Examinations.

THE SELECTION OF TEACHERS on a political or a sectarian basis is not, as it should be, "a thing of the past." More and more public sentiment, common justice, and common sense demand that teachers and superintendents shall be selected solely on the score of fitness. A trustee who would sacrifice the best welfare of the children to party, church, or personal interests, should thereby become liable to impeachment and decapitation.

THE STATE BOARD OF EDUCATION, as is well known, prepare the questions used in the examination of teachers each month by county superintendents, and they do this work well, and deserve much credit; but they are not, as a board, responsible for the "answers" published. The editor of the Journal has arranged with several eminently qualified persons to answer these questions—in fact, one set of questions is answered by a member of the board, but the board as such has nothing to do with the answers and is not entitled to any credit therefor.

EDUCATIONAL LEGISLATION.

At the time of going to press no bill touching education has become a law, and it is feared that the "dead lock" on political issues will prevent any further legislation. None of the appropriations for the educational and benevolent institutions have yet passed. Several good bills are pending, and one or two bad ones, but it is not necessary to discuss them till they become laws. The Journal will simply say that the propriety of the state's publishing a series of school books is more than questionable; and the only change needed in regard to township trustee, is to require him to publish a detailed account of his transactions, and when he issues a warrant to make it illegal and not collectible unless recorded and endorsed by the recorder of the county. To this should be added the power of the County Board of Education to determine what the schools need and the prices to be paid.

Next month a full record of what the Legislature does, if anything, will be given.

THE RECITATION.

The recitation occupies most of the teacher's time while in the school room, and its importance can not easily be over-estimated. It is the purpose of this paragraph to call attention to one use to which the recitation should *not* be put. The recitation hour is *not* a study hour. The time of the pupil at recitation should not be given to study, or learning the lesson; neither should it be largely given to the simple re-production of what has been learned. To illustrate: To have pupils solve problems in arithmetic, except as additional illustrations to fix principles, is not the best use of time. Suppose a class is put to solving the problems of the lesson—(1) If the lesson has not been learned the recitation hour becomes a mere study hour, and the children are allowed and encouraged to do what should have been done as a preparation for the recitation. (2) If the lesson has been properly prepared, then it is a comparative waste of time to have the work re-produced in detail. It insures the best preparation to require the work

brought to the class, and thus more time can be given to testing the pupils' understanding of the work; to giving test work, and to giving additional information. Simple *re*-citation is only a part of the work of the recitation hour. The best teacher is he who gets the best thinking on the part of the pupils.

NATIONAL EDUCATIONAL ASSOCIATION.

The officers of the National Association are doing all in their power to make the next meeting at Chicago, July 12-16, not only the largest assemblage of teachers and friends of education ever convened, but also one productive of permanent good to the cause of education and the profession of teaching.

The Introductory address, on the first evening, will be given by Richard Edwards, LL. D., State Superintendent of Illinois, an eminent educator and eloquent orator. The general program for the six sessions to follow is all completed. Only *one* topic will be considered during a session, and ample time will be allowed for free discussion. The topics are timely, and include a full range of subjects, with able men and women to discuss them.

The meeting of the National Council will open its sessions July 7, and continue until the meeting of the National Educational Association opens.

The meetings of the *nine* departments will be held on the afternoons of July 13, 14, and 15.

The railroads will sell "round-trip tickets" from all principal stations, to Chicago and return, for *one fare*, plus two dollars (\$2.00) to pay for a membership coupon. Tickets good going from July 5 to 15, and returning to September 10, inclusive. Excursions are arranged to—*everywhere*.

An exposition of all school products, school books, apparatus, and all appliances, will be held for ten days at Chicago, under the supervision of Hon. A. G. Lane, Supt. of Public Schools of Cook County; address at Chicago.

Committee on Indiana Educational Exhibit, as appointed by State Supt. Holcombe: H. M. La Follette, Lebanon; J. M. Bloss, Muncie; J. T. Merrill, La Fayette; J. W. Layne, Evansville; C. W. Hodgins, Richmond; W. A. Bell, Geo. F. Bass, Indianapolis; W. J. Houck, Portland; Calvin Moon, South Bend.

THE Northwest Indiana Superintendents Convention was a large and respectable gathering at Logansport. No regular program had been prepared, but several subjects of considerable importance were discussed informally.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR JAN.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to legibility (50), regularity of form (30), and neatness (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

GRAMMAR.—1. Write sentences illustrating four uses of the noun clause.

2. The Indian *in his efforts to overcome nature* built canoes. What do the italicized words modify? How do you know?

3. Write the plurals of the following nouns: *Staff, beef, Henry, phenomenon, Frenchman, German, man-servant, spoonful, grocery, chimney*.

4. How is the possessive case of nouns formed? Illustrate the formation of both singular and plural possessives.

5. What is the distinction between the use of *shall* and *will*?

6. Define mode. Is the infinitive a mode? Why?

7. Correct, if necessary: (a) I do not doubt but what Luther did the world a great service. (b) I do not know but what I can go. (c) I do not know what you were saying. (d) The story what he told is untrue.

8. Analyze the following sentence: His praise is lost who waits till all commend.

9. State the points of likeness and difference between the clause and the phrase.

10. What is meant by *comparison of adjectives*? When is each degree of comparison used?

PHYSIOLOGY.—Discuss the Nervous System and its functions.

SCIENCE OF TEACHING.—1. What do you conceive to be the relation between brain and mind?

2. Define attention. Explain the importance of attention as a condition of effective mental work.

3. On what fundamental principle does the word method in primary reading rest?

4. What are the two fundamental operations which it is possible for the mind to perform on numbers?

5. What is the educational value of geography, first, as information giving; second, as a disciplinary study?

6. What should be the first steps in teaching geography?

7. What are the proper uses of maps in connection with geographical study?

READING.—1. State three principal objects to be attained by the study of reading.

2. Should the teacher give an example of how the lesson ought to be read? Give reasons for your answer.

3. Name three American writers of History, and the most important work of each.

4. Give a list of ten books which you would recommend to a boy of fifteen.

5. What are some of the benefits that may arise from the study of Literature in the reading classes?

6. Read a selection of prose and one of poetry. 50.

HISTORY.—1. Name two Spanish and two English explorers, and state what part of North America each visited.

2. Locate the following battle-fields: Stony Point, Antietam, Lundy's Lane, San Jacinto, Wilderness.

3. Tell all you can about the Kansas-Nebraska Bill.

4. What Vice-Presidents have become Presidents before the end of the term for which they were elected? What can you say of their administrations?

5. Tell what you can of the manner of electing a U. S. Senator.

ARITHMETIC.—1. What differences exist in the multiplication of decimals, common fractions, and compound numbers?

2. Reduce $\frac{1}{4}$ to 76ths, and explain your work. 5, 5.

3. Why does multiplying a fraction by a fraction, divide the value of the numerator of the multiplicand?

4. Multiply .05 by .004 and demonstrate the rule for pointing off decimals. 5, 5.

5. What will it cost to build a wall 10 dekameters long, 3 metres high, and 60 decimeters thick, at \$5 a cubic metre? 5, 5.

6. A merchant buys 2 tons of wool at 30 cents a pound, paying for it in coffee, tea, and sugar, equal values of each, coffee at 20 cents, tea at 50 cents, and sugar at $12\frac{1}{2}$ cents a pound; how many pounds of each did he give? 5, 5.

7. If in selling goods at 40 cents a yard I lose 20%, at what must I sell them to gain 20% after I have kept them six months, money being worth 6% per annum? 5, 5.

8. Extract the square root of 571,787.

9. A lot of ground is 20 feet by 80 feet; what is the diagonal of a square piece of equal area? 5, 5.

10. At \$2 a rod for fence, will it cost more or less to fence 160 acres in the form of a square, or of an oblong twice as long as broad? How much? 5, 5.

GEOGRAPHY.—1. Where are the highest mountains in the United States? What is the (approximate) height of the highest of these?

2. What is the reason that all the lakes of Indiana are in the northern part of the state, and nearly all the hills in the southern part?

3. Why has the Columbia River no delta?

4. Bound Switzerland. Name three of its largest cities.

5. On what waters would you pass in a journey by water from Pittsburg to Constantinople?
6. Describe the phenomena of the tides and the cause of them.
7. Compare the physical characteristics of Indiana with those of New Hampshire.
8. Locate Borneo, Sicily, Isle of Wight, Nantucket, Elba.
9. Describe the soil and productions of Florida.
10. What part of North America is in the latitude of London? How does the climate in the two regions mentioned differ, and why?

ANSWERS TO PRECEDING QUESTIONS.

GRAMMAR.—1. *a.* Subject; as, "Who cheapens life abates the fear of death." *b.* Predicate; as, "My impression is, that he will succeed." *c.* Object; as, "See what a rent the envious Casca made." *d.* Appositive; as, "One truth is clear: Whatever is, is right."

2. They modify the predicate *built canoes*. The phrase is used to express cause.

3. Staffs or staves according to meaning; beeves, Henrys or Henries, phenomena, Frenchmen, Germans, men-servants, spoonfuls, groceries, chimneys.

4. The possessive case of every noun not ending in "s" in the singular, is formed by annexing the apostrophe and letter "s". In the plural, when the noun ends in "s" the apostrophe only is annexed, otherwise the apostrophe and "s" to form the possessive. Examples: King's, kings'; ox's, oxen's; man's, men's; lady's, ladies'; thief's, thieves'. In forming the possessive singular of nouns that end in "s" the practice of writers is not uniform, as, "Davies' Mathematics," "Harkness's Latin Series," etc.

5. In the first person, *will* is used to express determination; *shall*, to express simple futurity. In the second and third persons, simple futurity is expressed by *will*; while *shall* implies a promise or determination on the part of the speaker—not the subject.

6. Mode is the property of verbs which shows how the assertion is made. The infinitive expresses the act or state without making any assertion. It may be used as the subject or object of a verb, and also as the predicate complement. It partakes so largely of the nature of a noun, that it is generally called a verbal noun, and, consequently, is not classed among the modes by later grammarians.

7. *a.* I do not doubt that Luther did the world a great service.
b. I do not know but I can go.
c. Correct.
d. The story that he told is untrue.

8. Complex declarative sentence. "His praise who waits till all commend," is the logical subject. *Praise* is the subject nominative, modified by the possessive *his*. *His* (equivalent to *of him*) is modi-

fied by the relative clause "who waits till all commend." *Who* is subject nominative of this clause, unmodified; *waits* is the predicate verb, modified by the adverbial clause of time and purpose, "till all commend." *Is lost* is the predicate verb of the principal proposition.

9. Both are subordinate elements in a sentence. Both may be used to perform the office of a single word or part of speech. The clause differs from the phrase in having a subject and predicate.

10. Comparison is the variation of the form of an adjective to express different degrees of quality or quantity. The comparative degree generally expresses a comparison between two objects, the superlative between more than two.

GEOGRAPHY.— 1. *a.* The Sierra Nevada Mountains in California.

b. Nearly 15,000 feet.

2. That part of Indiana north of the parallel of 39° belongs to the territory over which the glaciers of the glacial epoch passed. The lakes lie in the depressions of the glacial drift, while the hills lie south of the area thus affected.

3. Deltas are not formed where the outlets of rivers are disturbed by swells, currents or tides. Hence the Columbia River, flowing into the open ocean, forms no delta.

4. *a.* Switzerland is bounded on the north by the German Empire; east, by the Austro-Hungarian Monarchy; south, by Italy; west, by France. *b.* Geneva, Zurich, Berne.

5. Ohio River, Mississippi River, Gulf of Mexico, Florida Strait, Atlantic Ocean, Strait of Gibraltar, Mediterranean Sea, Strait of Dardanelles, Sea of Marmora, Strait of Bosphorus.

6. The name of tides is given to the alternate rising and falling of the waters of the Sea, occurring at intervals of six hours. The phenomenon is attributed to the attraction exerted by the sun and moon upon the earth (the moon's influence being three times that of the sun.) The waters being free to move are drawn towards these bodies, while at the same time, on the opposite side of the earth, another swell is formed. When the sun and moon are in conjunction or opposition, as at new and full moon, their action is united, resulting in a higher tide than usual, called the spring tide.

7. Indiana has a level, or slightly rolling surface, with no mountains; while New Hampshire is rugged and mountainous. The soil of Indiana is rich and very productive; that of New Hampshire is sterile.

8. Borneo lies southeast of Asia, and is surrounded by the China Sea and the Celebes Sea. Sicily lies south of Italy in the Mediterranean. The Isle of Wight lies south of England, in the English Channel. Nantucket lies southeast of the State of Massachusetts, in the Atlantic Ocean. Elba lies west of Italy, in the Mediterranean.

9. The soil of a large part of Florida is poor, but there are many

fertile tracts, and the warm, moist climate largely compensates for the inferior character of the soil. The chief productions are tropical fruits, garden vegetables, sea island cotton, and lumber.

10. The southern part of Labrador, James Bay, Lake Winnipeg, etc., are in the same latitude with London. The climate of London is much milder than the corresponding latitudes of North America; due chiefly to the warmth brought to the western shores of Europe by the Gulf Stream.

SCIENCE OF TEACHING.—1. The brain is the organ of the mind. The relation between the two is such that the mind can not act with accuracy when the brain is not in a healthy condition. Hence the necessity of looking after one's general health if he expects to do good thinking.

2. Attention is the mind's consciousness of what is present; it is the active self-directing of the mind to an object. Unless the mind takes cognizance of an object and bends its force upon it, no accurate conception of it can be had; without this no effective mental work can be done.

3. On the principle that the mind sees a new object first as a whole.

4. Combining and separating them.

5. As information giving it furnishes a basis for the intelligent study of history; for reading to obtain information in regard to the events of the day; and for commerce and travel. As a disciplinary study it is one of the best for the culture of the imagination. It also is good to strengthen the memory and in higher grades appeals to the reason.

6. The first steps should be a course in home geography, based on the study of things. This should be oral. This course should include "position, direction, distance, surface, map-representation, land and water, soil, climate, natural productions, the occupations of men, races of men," etc.

7. The proper use of the map is to fix in the mind the relative position of continents, oceans, rivers, mountains, cities, etc.

READING.—1. Ability to comprehend quickly the thought expressed by the printed or written symbols; ability to use the thought comprehended so as to make it one's own; power in the expression of the thought (or sentiment) for the effect on others.

2. As a rule, no. Because the true basis of correct reading is not imitation, but the child's possession of the thought or sentiment and the thought or sentiment's possession of the child.

3. Bancroft, "History of the United States"; Davis, "History of the Great Rebellion"; Wilson, "History of the Slave Power in America."

4. Scott's "Tales of a Grandfather"; Higginson's "History of

the United States"; Irving's "Sketch Book"; Alcott's "Little Men"; "Zigzag Journeys in the Orient"; Lamb's "Tales from Shakespeare"; "Life of Abraham Lincoln"; Kingsley's "Greek Heroes"; "Little Folks in Feathers and Fur."

5. Better thoughts, higher sentiments, better language, a taste for a purer form of literature, knowledge of what good books to read, etc.

PHYSIOLOGY.—The nervous system is the center of life in man and the lower animals. Through it alone are consciousness and volition, as well as those reflex acts chiefly the result of habit. It is the medium of reception and of direction on the part of the mind. It is composed of two kinds of matter: gray, or receiving and originating; white, or transmitting. By its ramifications it binds all parts of the body to the controlling center, thus producing and maintaining order and unity of action throughout the system. Disease in it means great danger to both body and mind.

ARITHMETIC.—1. In the multiplication of decimals the denominator is not expressed but indicated by the decimal point; in common fractions it is. In multiplication of decimal fractions the decimal scale is preserved, while in compound number it is the scale of the table from which the compound number is taken.

2. $1 = \frac{7}{8}$; $\frac{1}{9} = \frac{1}{9}$ of $\frac{7}{8}$, or $\frac{7}{72}$; $\frac{7}{8} = 4 \times \frac{7}{72}$, or $\frac{7}{9}$. Ans.

3. *It does not do it.*

4. $.05 \times .004 = .00020$. Ans. Multiply as in whole number, $4 \times 5 = 20$; the multiplicand was not 5, but .05, a number one hundred times as small as 5; therefore the answer (20) is 100 times too large. $20 \div 100 = .20$. The multiplier was not 4, but .004, a number 1000 times as small as 4; hence my answer is 1000 times too large. $.20 \div 1000 = .00020$.

5. 10 dekameters=100 meters. 60 decimeters=6 meters. 3 meters, (height) \times 100 meters, (length) \times 6 meters, (thickness)=1800 cu. meters, capacity. $\$5 \times 1800$ cu. meters=\$9000, cost. Ans.

6. 2 T. of 2000 lb. at \$30 a pound cost \$1200. $\frac{1}{2}$ of \$1200=\$600, cost of each kind.

$\$400 + \$.20 = 2000 \times = 2000$ lb of coffee.

$\$400 + \$.50 = 800 \times = 800$ lb of tea.

$\$400 + \$.12\frac{1}{2} = 3200 \times = 3200$ lb of sugar.

} Ans.

7. $\$.40 = \frac{1}{5}$ of cost. $\$.50 = \text{cost}$. 20% of $\$.50 = \$.10$, gain. 6% of $\$.50$ for 6 mo. = $1\frac{1}{2}\%$. $\$.50$ cost + $\$.10$ gain + $1\frac{1}{2}\%$ int. = $\$.61\frac{1}{2}\%$, the selling price.

8. $\sqrt{571787} = 756.16+$.

9. A lot 20 x 80 ft. = a lot 40 ft. square. $\sqrt{40^2 + 40^2} = 52 + \text{ft.}$, the diagonal of square.

10. 160 A. = 25600 sq. rd., area. $\sqrt{25600}$ sq. rd. = 160 rd. on one side of square. 4×160 rd. = 640 rd., distance around square. $\$2 \times 640$ rd. = \$1280, cost of fencing square. Width of oblong = $\sqrt{\frac{1}{2}} (25600$

sq. rd.) = $113.137 + \text{rd.}$. The length = $2 \times 113.137 + \text{rd.}$, or $226.274 + \text{rd.}$. $678.822 + \text{rd.}$, distance around. $\$2. \times 678.822 \text{ rd.} = \$1357.644 + \text{cost of fencing in form of oblong.}$ $\$1357.644 + - \$1280. = \$77.64 +$. More in form of oblong, $\$79.64 +$. Ans.

Correction of 6th problem in February.—5 lb @ 7000 gr. = 35000 gr. $35000 \text{ gr.} + 480 \text{ gr.} = 72\frac{1}{2} \times = 72\frac{1}{2} \text{ oz.}$ T. $72\frac{1}{2} \text{ oz.} @ \$.48 = \$35.$, the selling price. 5 lb @ $\$5. = \25 , cost. $\$35 - \$25 = \$10$, gain.

READING CIRCLE DEPARTMENT.

OUTLINES FOR MARCH.

HAILMAN'S LECTURES ON EDUCATION—LECTURE VII.

"Rousseau has told us that he resolved on having fixed principles by the time he was forty years old. Among the principles of which accordingly he laid in a stock, were these: 1st, Man, as he might be, is perfectly good; 2d, Man, as he is, is utterly bad. To maintain these opinions, Rousseau undertook to show, not only the rotten state of the existing society, which he did with notable success, but also the proper method of rearing children so as to make them all that they ought to be—an attempt at construction which was far more difficult and hazardous than his phillipics. This was the origin of the *Emile*, perhaps the most influential book ever written on the subject of education."—*Robert Herbert Quick*.

"The greatest educational event of the eighteenth century, before the expulsion of the Jesuits and the events of the French Revolution, is the publication of the *Emile*. Rousseau is undeniably the first in rank among the founders of French Pedagogy, and his influence is felt abroad, especially in Germany."—*Compayre*.

Rousseau was a reaction against the artificial education of the eighteenth century. Intellectual education had gone to seed in verbal memorizing. Children were assumed to be put through their paces in moral actions, as a jockey trains his horse: "Do for me an act of prudence, or of justice, or of benevolence." Such were the requirements of that time. This was of course formality, artificiality—the very opposite of naturalness. Rousseau swung the pendulum back to the other extreme and demanded a complete return to nature. He made a deity of nature, or rather of what he conceived nature to be, and hence desired to abolish all existing educational institutions and methods. Instead of a teacher, he would have a 'governor'—adopting the term of Locke. Instead of the school, he would have informal private instruction; and instead of parrot-like memorizing of words, he would substitute learning from objects by doing whatever could be

done with them. Finally, instead of stilted and artificial lessons about moral action, by teachers and parents whose action gave the lie to their words before they left their lips, he would substitute practice in right doing, great care being taken that the child be kept from all contaminating influences.

Rousseau's influence and fame rest on his grasp of the principle that education must be developed by a study of children's minds. This was by no means new, as Montaigne and Locke, Comenius and Ratich had all given more or less clear utterance to this idea. But it was reserved to Rousseau to seize it as a conscious principle to be applied to all the problems of education. The scope of this as a law of development for the science and art of education, becomes clear when we reflect that all future progress must be wrought out along this line. Properly construed this principle means that all progress, whether by education in general, or any individual teacher in particular, must come from a study of the problem with the problem immediately before the student. Painter (*History of Education*) quotes the following to show Rousseau's breadth of view: "In the order of nature, all men are equal, their common vocation is the estate of man; and whoever is well brought up for that will not fail in anything belonging to it. It is a matter of little importance to me whether my pupil be destined for arms, for the church, or for the law. Before the vocation assigned him by his parents, Nature calls him to human life. To live is the business I wish to teach him. When he leaves my hands, I acknowledge that he will be neither magistrate, soldier nor priest; he will be first of all a man—all that a man ought to be he can be; and, though fortune change, he will be prepared for every condition."

S. S. PARR.

MENTAL SCIENCE—WATTS ON THE MIND.

SUBJECT: "Improving the Memory."—Pages 124 144.

I. ITEMS OF PROFESSIONAL IMPORTANCE.—1. Charge the memory with the valuable only. IX, p. 129.

(a) "Verbal memory is legitimate in: 1. Certain much-used formulae; 2. Established definitions, exercises, and certain rules; and 3. Literary passages of authority, or historic significance, or poetic beauty."—*Fitch*.

2. Retentiveness of Mind and best Literature. XII, p. 130.

"The recent movement in favor of memorizing literary "gems" is worthy of all commendation."—*Hewett*.

3. The early Development of Memory. XIV, p. 131.

4. Attention and Memory. XV, p. 131.

"The systematic training of the memory should first be carried out in close connection with observation."—*Sully*.

5. Qualities of a Good Memory. XVIII, p. 132.

(a) "The characteristics of a good memory are: 1. Aptitude in applying the mind; 2. A firm grasp of what is learned—tenacity; and 3. Readiness in recalling what has been learned."—*Sully*.

(b) "The habit of mixing what is imagined or conjectured, with what actually occurred, weakens the memory and lessens its trustworthiness."—*E. E. White*.

6. Memory Improved through Exercise. xx, p. 133.

"In order to train the memory the child must be made responsible for its use."—*Hewitt*.

7. Specific Rules, (particularly 1-5, 7, 9.) xxiii, p. 134.

"The improvement of the memory is shown in: 1. That less concentration and fewer repetitions are needed for fixing an impression; 2. That impressions are longer retained; 3. That impressions will be recalled more readily, and with a higher degree of distinctness and fidelity than formerly."—*Sully*.

II. SUMMARIES.—1. Qualities of a Good Memory. 2. Rules for the improvement of the Memory.

a. "The longer the mind is held on a fact, and the more nearly the entire attention is given to it, the more likely is the mind to remember the fact."—*Tompkins*.

b. "When a subject is thoroughly understood, then it is mastered, and then it will be remembered, and so the memory will be cultivated and strengthened."—*R. L. Perkins*.

c. "Retention is greatly promoted by the 'laws of association:' (1) Connect the parts of new matter in the best way. (2) Connect the new acquisition with the old."—*Sully*.

d. "Unless the association of thoughts and words which we seek to establish is permanent, there is imperfect memory; and if the memory is imperfect, our labor is lost."—*Fitch*.

III. GENERAL NOTES.—1. "That such facts and images, shall be put within its grasp as are worthy never to be forgotten, such as may enter into the very organic structure of the mind, and build up the intellect and character; that no habits of thought shall be begun and consummated by the teacher, which can not be woven into the very tissue of the understanding,—this is the great aim of the education of the memory."—*L. P. Hopkins*.

2. "We *must* memorize in order that we may understand, then hold in memory what we have understood."—*W. H. Payne*.

3. "The understanding has as its chief auxiliary the faculty of reproduction."—*Kant*.

4. "The conservative tendency in memory works against the progressive. The latter is manifest in early life, the former in old age."—*Sully*.

IV. COLLATERAL REFERENCES.—1. Journal of Education, July, 1884. 2. Indiana School Journal, May, 1885, p. 259; April, 1886, p. 189. 3. Kiddle's Cyclopedia of Education, Article "Memory."

R. G. BOONE.

HISTORY.

Green's Shorter History of the English People.

REVIEW: "From the death of the *old* the new proceeds,
And the life of truth from the rot of creeds;
On the ladder of God which upward leads,
The steps of progress are human needs."

"Just after the battle of Hastings (1066) Pope Gregory VII made these declarations:—

1. To the Pope belongs the right of making new laws.
2. All the princes of the earth shall kiss his feet.
3. He has the right of deposing Emperors.
4. The sentence of the Pope can be revoked by none.
5. He can be judged by none.
6. None may dare to pronounce sentence upon any one who appeals to the Pope.
7. He never has erred, nor can he ever err.
8. He can loose subjects from the oath of fealty.
9. The Pope is holy. He can do no wrong."

* * * * *

It is 1199, and John, the third of the Plantagenets is on the English throne. John's tyranny causes the nobles to revolt. *Langton* called a council of the barons and bishops and urged them to call upon King John to renew the municipal charter of Henry I. John and the nobles meet at Runnymede. It is 1215, and the result of this meeting is the granting of the Magna Charta by King John. The most important provisions of the charter were—first, the right to establish a Great Council composed of the barons, bishops, and earls whom the *King* should summon from time to time, together with the lesser barons whom the *sheriffs* of the counties should summon, and these two bodies together should constitute a Parliament; secondly, the right of every freeman to be tried by his peers. Pope Innocent III excommunicated the nobles for this demand upon the King. The nobles explained to the Pope that he had no right to meddle with the political affairs, or with the liberties of Englishmen.

This was taken as the first great step in the march of Liberty. But this liberty was for the nobles only; the common people still had no rights. Time passes. Dr. Wickliffe preaches at Lutterworth. He translates the Bible into English. Chaucer writes the Canterbury Tales. An English language is established. Wickliffe preaches against the impurities that have crept into the Church; Chaucer burlesques the improprieties of the priests; the *common people* begin to read, to listen, to think. They ask *themselves*—

"When Adam dived and Eve span,
Who was then the *gentleman*?"

They *answer* the question in *Wat Tyler's Rebellion*, which practically overthrows *serfdom* or *villainage*.

Lollardism took its rise as a result of Wickliffe's preaching. Annie of Bohemia became the wife of Richard II of England; she brought with her to England Prof. Toulfash, a noted scholar and earl of Bohemia. Toulfash became a lecturer in the University of Prague. He had while in England become a follower of Wickliffe, and so promulgated his doctrine at Prague. *John Huss* listened to Toulfash and became one of his converts. Sigismund of Germany permitted Huss

to be burned at the stake for his religious tenets in compliance with an edict from the Pope of Rome. The rivers carry the ashes of Wickliffe and Huss to the sea, but the sea can not wash out the thoughts they have planted. Time passes. A boy sings in the streets of Eisenach for his bread. The seed of truth sown in England and transplanted in Bohemia is bearing fruit, and before long this boy partakes of it. The *boy* became the "Father of the Reformation."

At the fall of Constantinople her great scholars distributed themselves among the universities of the Eastern Empire: students flocked to them from all parts of the civilized world. Students from Oxford soon returned carrying the "New Learning" into England, and thus a fresh impetus was given to English thought. In the long struggle of King and noble, of Pope and people, that had intervened since the writing of the Canterbury Tales, the translation of Wickliffe's Bible and the burning of Huss, until the invention of the printing press and the discovery of America, the progress of thought had been so retarded that political and religious liberty was no longer an enthusiasm among the people; and literary taste was almost a thing unknown. But Henry VII had become King of England; had succeeded in marrying his numerous children to his satisfaction and died, and his son Henry VIII reaches the English throne.

Henry favors the New Learning, but writes a book against the *new religion*, that so pleases the Pope that he gives Henry the title of "Defender of the Faith," "a title borne by all the sovereigns of England from then until now." But a hundred years before this time, Parliament was persuaded by the bishops who were then out of humor with the Pope to pass the following law:

"All persons who recognize the Pope at Rome as being in authority superior to the King shall forfeit their lands and all their property, and have no protection from the King."

This law served Henry well when he decided to sever his allegiance with Rome, assert his supremacy, divorce Catharine of Aragon, demolish the monasteries, monopolize the church lands, cut off the heads of primates and establish his own succession. "The Pope as head of the universal church claimed the power of absolving subjects from their allegiance to their king. The King in self-defense was compelled to require his subjects to disclaim all sympathy with these pretensions, and to recognize no higher authority, spiritual or secular, than himself within his own dominions."

From the very nature of *affairs* Henry was obliged to tolerate a clemency toward both Catholic and Protestant; and his recognition of the great scholars of his day stands out as a relief to the baser background of his nature. But the many-wived King joined the "silent majority," and his son Edward VI took his father's place. There is little in his reign worth noting except his cowardly intrigues in which

he tried to prevent Mary's succeeding him—and the consequent tragic death of Lady Jane Gray and her adherents.

Mary reached the throne through blood; all the ancestral prejudices of Catholic Spain combined with the avenging thirst inspired by her mother's tears and shame and wrong centered and magnified in the bosom of this proud descendant of Ferdinand and Isabella; Protestantism to Mary meant Annie Boleyn; what so much wonder that she waded through the blood of her victims and sealed her reign with the lives of saints? But Mary was proud as well as revengeful, and with Philip, the son of the mightiest monarch on the face of the earth for her husband, she felt a conscious power over her subjects that might have turned the head of a better woman. Wretched, forsaken, though wielding an empire, she died, and "her sister and her foe" took her place."

Elizabeth, the *woman* "without a model"; the most capricious, the most daring, the most willful, the most politic princess of any age; a woman with the judgment of a man, the penetration of a diplomat, the philosophy of a stoic and the heart of a coquette; true withal to her subjects and respectful toward her Parliament; ambitious, proud, stubborn, passionate, deceitful, full of intrigue, partial—yet the most adored by her subjects and the grandest Queen of any age or nation. She was a medley of contradictions and extremes that the world can neither comprehend nor parallel.

"An earnest faith in the supernatural, an intensely real conviction of the divine and devilish forces by which the universe was guided and misguided was the inheritance of the Elizabethan Age from Catholic Christianity."

"Vast spiritual and material continents lay for the first time displayed; opening fields of thought and fields of enterprise of which none could conjecture the limit. Old routine was broken up. Men were thrown back upon their own strength and their own power to accomplish whatever they might dare."

"It was given to Elizabeth to conduct the outgrowth of the national life through its crisis of change; and the weight of her great mind and her great place were thrown on the people's side."

Catholicism had so degenerated that it no longer furnished any nation or individual the basis and conditions for a noble, manly, holy life; feudalism had also lost its power as a social organization, and men were ready to give their hearts to any one who had the power and enthusiasm to lead them out of *themselves* and their old traditions into new and higher life and energy. Elizabeth alone, of all the sovereigns of Europe seemed to grasp the thought that men were seeking new opportunities, new resources, physically and spiritually, and could no longer be satisfied if they would, with the effete religious forms of decaying institutions, and crumbling creeds. Her strangely contradictory nature manifested its culminating attribute in her desire for praise; and with a woman's intuition she saw that she could best satisfy the

ambition of her life, as well as best subserve the interests of her subjects by a *lenient* and *progressive* policy.

There are single steps in the policy of Elizabeth that would require the writing of a book to explain them; noticeably among these are her dealings with Mary Queen of Scots, the Catholic question, the Spanish question, her position with reference to the Netherlands, her treatment of Raleigh, her power to retain and sustain in her council some of the most learned and powerful statesmen that the world has ever produced.

Advanced Work—Pages 455 to 543.

TOPICS.—*a.* Meaning of Lollard, Puritan, Separatist. *b.* History of the rise of these sects. *c.* The relation of the New Learning to the New Religion. *d.* Some knowledge of the great *leaders* in each. *e.* The Long Parliament. *f.* Name the English sovereigns who ruled or tried to rule without Parliaments, and find out their reasons for so doing. *g.* The origin and development of Puritanism in this country. *h.* Character of James I, and the manner in which he obtained the English throne. *i.* Cause of the Civil War of 1642.

"To be entirely just in our estimate of other ages is not difficult—it is *impossible*."

"Eras like individuals differ from one another in the species of *virtue* which they encourage."

"But life shall on and upward go;
Th' eternal step of progress beats
To that grand anthem, calm and slow,
Which God repeats."

"God lives and lifts his glorious mornings up."

"Whene'er a noble deed is wrought,
Whene'er is spoken a noble thought,
Our hearts in glad surprise,
To higher levels rise."

REMARKS.—Give especial attention to Elizabethan Literature; also notice carefully outlines for Literature for last year, in Journal.

NOTE.—I trust that the suggestion of last month's Journal in regard to the value of much reading upon the course, and especially of reading in connection with the work in History, may impress us with a vivid consciousness of its value. Chapters VI, VII and VIII, in our course in History, if studied in all their bearings and relations, with side-lights from poetry, romance, song, fiction, and History proper, including the Philosophy of this period, would furnish a liberal education in itself. To be sure we have not the time *just now* to carry out all these various lines of reading, but we do have time for some of them. Neither have we access to all the necessary books, but no teacher dare in these times be without a *good* library, however small it may necessarily be, and we can add something to our stock of books *this year*; besides it is a rural neighborhood indeed that does not in some quiet nook furnish its "Blue-

Stocking" or its "Junto," from which we may borrow some good book bearing upon some of the various topics touched upon in the text. Of course we are all familiar with the opportunities which the great historians have placed within our reach, but I fear we do not all appreciate the fact that if we will "*rummage*" in our *mental garret* we shall find many a gem which has been impressed upon our childhood memory—bread cast upon the waters which shall return after many days—and which now for the first time has a "local habitation and a name." Noticeably among these will be found the many real gems of historical literature that abound in our *numerous* school readers. Who does not feel that the fire of youth is immortal when, after studying in our text the battle of "Flodden Field," he re-reads those old familiar lines from Sir Walter Scott, beginning,—

"Day set on Norham's castled steep,
And Tweed's fair river broad and deep."

This is but an illustration of hundreds of circumstances that any teacher can recall—and we all know that *repetition* is one of the primal laws of memory—besides every author that we read upon a given subject puts it in his own peculiar lights and shades, and thus gives us the liberty of choice. It is not the many books that we read, so much as it is the power to "get the right good out of a book" that makes the difference between the wise and the unwise.

MATTIE CURL DENNIS.

READING CIRCLE NOTES.

The knowledge that is strictly professional,—that sets off the teaching vocation from others and is peculiar to the teacher, can be acquired by every one who will pursue diligently and persistently, a course of study such as the Reading Circle Board has prescribed. It is designed that the Reading Circle be to the teachers of the State, in the way of technical knowledge and training, what the Chautauqua Circle is in the way of general culture to the people of the country. G. P. BROWN.

THE present need of teachers touching the Reading Circle is an efficient—simple, inexpensive but vigorous, and therefore efficient—local organization, throughout the state. There are teachers enough who are ready and, with proper and present direction, would be anxious to do regularly and punctually all the work prescribed. Teachers of experience no less than the novices, see in the enterprise a means of valuable personal culture. But they need, all of us need—more or less of cooperation. The local institutes and superintendents' gatherings, and teachers' meetings, and county associations, and professional clubs can all do the cause much valuable service. The enterprise is yet new. The best sentiment is yet to be cultivated. The interest in towns, and certain counties, and forward sections, needs to be dissem-

inated. Teachers may themselves do much toward popularizing the course, by making it, first, thoroughly understood.

Then, again, as has been suggested, the columns of the local papers may profitably be enlisted in spreading the results of Reading Circle work. One paper that comes to the writer regularly reports the business of township institutes, and as regularly includes a statement of the condition of the local circle. The value of this, as of any other legitimate enterprise, is measured by the use made of it.

STEPS are on foot looking to the uniform presentation of Reading Circle interests before the county institutes this summer. To this end it has been thought institute workers would be willing to contribute their services for the general good. If convenient time and interest can be found it is hoped to have, at some date before the institute season, a meeting of such regular workers when the plan and the worker may be considered. It is desired, then, that all regular institute instructors who are interested in this matter, and are willing to do so much for the teacher and for Indiana's professional standing, send by postal card, their names to R. G. Boone, Bloomington, Ind., together with any additional information concerning their institute work, or suggestions, concerning the Reading Circle interest, they may care to submit.

It is hoped this may be done at once, and so enable the board to provide promptly for the approaching season.

THERE is the best interest in the Reading Circle work in Armstrong township, Vanderburgh county, that we have had anywhere in the county since the circle was started. There are seven teachers, and each comes to the institute prepared to take any subject. Three tickets are then made out and put with four blanks, and each draws for his subject. The disadvantages of the plan, I think, are more than balanced by the increased interest and the effort made to be fully prepared. The school is in session in the forenoon, but is usually dismissed in time for suggestions from other teachers before dinner. The afternoon is devoted exclusively to the Reading Circle work. The growth of the circle in this county has been hindered by the rumor that it was a scheme to sell books. State Board questions have done much to dispel that notion.

WM. MOSS.

THE READING CIRCLE IS FOR THE TEACHER, not the teachers for the Reading Circle. The organization looks to the good of the membership. Helpfulness to the readers is the only excuse for any organized control. The board has no plans to *insist* upon. If the present order is not such as to meet the needs of teachers, or is not adapted to the necessary conditions under which teachers must labor, then the organization should be modified to a better adjustment. This the board can do only after, or with, a thorough understanding of the work and

wishes of the local circles. Let then, fair, honest views be expressed for this Department, all news of general interest submitted, reports of progress in reading, reports of discussions, questions touching the work, suggestions for the future, etc, *The Reading Circle is for the teachers.*

MISCELLANY.

QUERY.—Can *black* and *dry* be compared?

Ans.—Yes: Black, blacker, blackest; dry, dryer, dryest.

HOWARD COUNTY Teachers' Association will be held the second Saturday in March.

A NEW Normal School will be opened at Columbus, Indiana, March 22, 1887. J. E. Polley, principal.

KNOX COUNTY Normal School and Business Institute will hold its next annual session at Bruceville, opening March 21, and closing May 28, 1887.

COMMENCEMENT at Brazil February 4th. The schools at Brazil are reported in a flourishing condition, and the High School one of the best features,

THE firm of Potter, Ainsworth & Co., will hereafter be known as Potter, Knight, Ainsworth & Co., and will continue business in places occupied by former firm.

A COUNTY ORATORICAL CONTEST was held at Amboy Academy February 25. There were ten participants—one being a lady. The result has not reached us.

SUPERINTENDENT E. E. WHITE, of the Cincinnati Schools, has abolished examinations for promotions, substituting therefor the average of the daily recitation records.

THE Northern Indiana Superintendents' and Teachers' Convention will hold its next semi-annual session at South Bend, March 17, 18 and 19. The program is good, and a large attendance is expected.

RANDOLPH COUNTY NORMAL will be held at Winchester, commencing June 20 and continuing eight weeks. Instructors—H. W. Bowers, County Superintendent, C. H. Wood and F. S. Caldwell.

WHAT DO YOU CALL THIS? A person desiring to ascertain the merits of the Indiana School Journal writes to this office, saying: "Please send me sample copies of the Journal from Jan. No. 1886 to Jan. No. 1887."

THE Central Illinois Teachers' Association will hold its third annual meeting at Danville, Ill., March 25 and 26. The names of Dr. Richard Edwards, Dr. D. S. Jordan, and Geo. P. Brown, appear upon the program. This will insure the success of the meeting.

SPICELAND ACADEMY was never before in so prosperous a condition; the attendance is unprecedented. This is the largest "Academy" in the State. All other schools of this grade take the name "College" or "University." It has been noted for years for the high order of its work. Thomas Newlin is Principal.

THE officers elect of the high school section of the State Teachers Association are: President, W. W. Byers, Terre Haute; Vice-President, Miss F. C. Simpson, Jeffersonville; Secretary, Miss S. A. Riley, Bedford; Executive Committee, O. L. Kelso, Richmond, Chairman; H. G. Woody, Kokomo; E. E. Griffith, Frankfort.

W. H. ELSON has printed questions for promotion in the schools of his county. He requires the uniform use of these questions through the country schools, believing that it is the only sure way to mark the progress of the pupils, and locate them so that a new teacher will know exactly how to classify when entering a new neighborhood.

THE DISTRICT SCHOOL REPORTER is the name of a paper printed at South Bend, and issued by Calvin Moon. It is not to be issued weekly, monthly, or even yearly, but when the occasion demands. Its object is to give a brief history of the growth and progress of the schools of St. Joseph county for the year 1886, for the patrons of the schools. Teachers are requested to see that each family in the county have access to it.

SUPERINTENDENTS' CONVENTION.—The Superintendents of Southern Indiana, Northern Kentucky and Southeastern Illinois met in convention at Washington, Indiana, February 18 and 19. The meeting is characterized as very *profitable*. The next meeting to be held in Jeffersonville—time not named—will have a program prepared by R. W. Wood, Superintendent of Jeffersonville schools, who is the newly appointed Chairman of the Executive Committee.

HENRY COUNTY.—"Our Reading Circle numbers over one hundred, with circles in every township. We have the most interesting township institutes this winter we have ever had. Three and four townships have worked together, and this added interest. Taken altogether, so far, we have had a very prosperous school year." This is from County Superintendent, W. R. Wilson, who is keeping Henry, educationally, in the front rank of counties.

JASPER COUNTY.—Sanford Halstead, a teacher in Jasper county, found it necessary to inflict corporal punishment upon one of his female pupils. The girl's brother violently assaulted the teacher for this act, when in return he was arrested for assault. The case excited much interest in the county, and the proceedings were carefully noted by good citizens. The result was the imposition of a fine of \$35.25 against the defendant, in default of the payment of which he was lodged in the county jail.

CONSTITUTIONAL OR UNCONSTITUTIONAL.—Early in the session of the present Assembly a bill was introduced by Senator Fowler declaring the act by which money is given to the State Normal School from the public tuition fund unconstitutional. President W. W. Parsons prepared and read before the Educational Committee a defense of the law so clear, forcible, and conclusive, that the committee, almost to a man, decided with him, and the bill has made no headway. Mr. Parsons would make a good lawyer.

THE BIENNIAL REPORT of the State Normal Schools shows what is generally known, viz.: That the school is in excellent condition. From personal observation, as well as from the report, we know that the attendance is large and the work excellent. Among the items of expenditure we notice that the State Superintendent is paid for time as a member of the Board of Trustees. As this is one of the duties of the office, and the law names an annual salary, the propriety of paying for time is certainly questionable.

PURDUE UNIVERSITY is in a very flourishing condition. The increase in attendance in the last five years has been sixty per cent., and in the last three years the attendance in the college department has doubled. The enrollment this year up to date is 380, and the prospect is that at least 400 will enroll before the year closes. With this large and gratifying increase, the standard of scholarship has been fully sustained, and the cost of running the institution has increased but thirteen per cent. This speaks well for President Smart and his associates.

A SUBSTITUTE FOR ATTENDANCE AT INSTITUTES.—A. K. Goudy, Superintendent of Pawnee county, Neb., offered to his teachers a substitute for attendance on institutes. A teacher holding a first-grade certificate, is excused unconditionally. Teachers holding a second-grade certificate, who have attended two annual institutes in Pawnee county, will be excused if they file with the Superintendent an essay embodying the result of the reading of such teacher, on some subject relating to his work. Such essay must contain not less than eight, nor more than fifteen pages foolscap. Is this measure wise, or otherwise?

NATIONAL ASSOCIATION OF SUPERINTENDENTS.—The Convention of Superintendents to be held at Washington, D. C., March 15, 16, and 17, offers a strong and interesting program on vital educational questions. Indiana is represented by Hon. J. W. Holcombe, who will read a paper upon "A System of Grading for Country Schools." The address of welcome will be delivered by Hon. W. B. Webb, of Washington. There will be voices from the Pacific coast, and echoes from all the intervening space. Arrangements have been made for return passage at one cent per mile, provided a certificate is procured

from ticket agent at starting point. Chas. C. Davidson, Alliance, O., is Secretary, from whom further information can be obtained. Ivison, Blakeman & Co.. have issued a very unique program of the proceedings.

OUT of the one hundred and thirty-six teachers of Morgan county, one hundred are members of the township institute reading circles, though not all of them have become members of the State Reading Circle. This county has had printed, for the benefit of schools, a "Teachers' Guide" of sixty-six pages, in which the work of each grade is divided into portions for each month, and simple topics and hints as to methods given. This plan has been productive of great good in arousing enthusiasm among pupils, patrons, and teachers, and in securing thorough and systematic work. A new high school course for the county is soon to be adopted, which will be an incentive to pupils of common schools to do higher work.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

TENTH ANNUAL MEETING, MARCH 23, 24, AND 25, AT MADISON, IND.

PROGRAM.

WEDNESDAY EVENING, 8:00.—Opening Exercises: 1. Address of Welcome, M. C. Garber, Editor Madison Courier. 2. Response and Inaugural Address, Prof. E. A. Bryan, Vincennes.

THURSDAY MORNING, 9:00.—1. National *vs.* State Reading Circle, Prof. R. G. Boone, Indiana University. Discussion opened by E. F. Sutherland, S. Indiana Normal. 2. Is it the Function of the Teacher to Instruct, to Educate, or to Train? J. A. Carnagey, Prin. Madison High School. Discussion opened by J. J. Mills, President Earham College. 3. The Influence of Christianity on Education, Dr. D. W. Fisher, Pres. Hanover College. General Discussion. Appointment of Committees.

AFTERNOON, 1:30.—1. What the People have a Right to Expect from the Public Schools and What they Receive, W. H. Ruckle, Prin. Lawrenceburgh High School. Discussion opened by W. S. Almond, Supt. Vernon Schools. 2. Reading *vs.* Elocution in the Public Schools, Prof. Jos. Carhart, De Pauw University. Discussion opened by A. H. Graham, Supt. Columbus Schools. 3. Brief Discussion: The Limit of the Graded School Course, E. E. Stevenson, Supt. Rising Sun Schools; W. J. McCormick, Supt. New Harmony Schools.

EVENING, 7:30.—Popular Address: The End of Education, Prof. C. H. Hall. Miscellaneous Business. Appointment of Committee on Officers.

FRIDAY MORNING, 9:00.—1. The Teacher in the Social Relation, Mrs. Alice F. Bridgman. Discussion opened by Phillmer Day. 2. Should the Rules of Civil Service Reform Prevail in the Selection of School Officers and Teachers? Prof. Howard Sandison. Discussion opened by Lewis H. Jones. 3. Brief Discussion: How to Secure and manage School Libraries, A. N. Crecraft, Miss F. C. Simpson.

AFTERNOON, 1:30.—1. Is the End of Education Good Citizenship? H. M. La Follette. Discussion opened by J. Edward Wiley. 2. Report of Committees. Election of Officers. Miscellaneous Business.

OFFICERS.—Prof. E. A. Bryan, *Pres't*, Vincennes: J. H. Martin, *Ch'n Ex. Com.*, Madison.

All papers are limited to 30 minutes. Leaders in the discussion of *papers* limited to 10 minutes.

RALIROADS.—Two trains arrive daily. The uniform rate will be *one and one-third fare* on all roads. Each delegate must purchase a first-class ticket to Madison, for which full fare will be charged; and upon request, the ticket agent will issue him a certificate of such purchase. Tickets for return will be sold for one-third fare to all presenting certificates countersigned by the Railroad Secretary of the Association. *Ask local agent for certificate.* Inquire for certificate at your local station in time to send to Railroad Secretary for them, in case they can not be procured from local agent. Tickets good Saturday, March 26th.

STEAMBOATS.—The U. S. Mail Line will sell tickets at *one and one-half fare*, charging *full fare* to Madison and *one-half fare* on return.

For further information address, with stamp for reply, J. A. Carnagey, Railroad Secretary, Madison, Ind.

HOTELS.—Headquarters at the Madison Hotel. Rates \$1.50 per day. Boarding in private families at \$1.00 per day.

The public schools of Madison will continue in session until Wednesday evening, March 23. Teachers will have an opportunity of looking through the schools, if they so desire.

PERSONAL.

J. E. Fetzer and Mrs. Lizzie Fetzer are just closing a successful term of school at Killian, Ind.

William M. Sinclair, formerly Supt. of the Monticello schools, now has charge of the schools at Caldwell, Kan.

John R. Weathers, of Cannelton, has been elected to the principalship of one of the ward schools in New Albany.

A Normal of eight weeks will be opened at South Bend, May 30, with G. A. Powles, F. J. L. Meyer and J. A. Byers in charge,

J. W. Runcie has had charge at Fort Branch for four years, and is trying to establish a permanent normal school at that place.

C. O. DuDois, a graduate of the State Normal School, will assist in the Normal Department of Moore's Hill College during its spring term.

Prof. G. W. Hoss, formerly of Indiana, will hold an Institute of Elocution and Oratory at Baldwin City, Kan., commencing August 1, and closing August 26.

James R. Hart is making a good record as Supt. of the Union City schools. He usually starts well, and what is more, he usually improves each year of his stay in a place.

Miss Flora A. Crouch, of Erie, Pa., is the name of the new principal of the Warsaw high school. She is a graduate of Wellesley College, and has made a good start in her work.

Hon. T. W. Bicknell, formerly editor of the *New England Journal of Education*, has become manager of a New England Colony Association for Dakota, with headquarters in Boston.

➤ Mrs. M. A. Mead is serving her seventh year as principal of the Union City high school. Her thorough scholarship and eminent ability gives her a high rank among the teachers of the State.

William McCracken, a graduate of Michigan University, has been elected to fill the vacancy caused by the resignation of Prof. Morgan, at Spiceland. Prof. Morgan resigned on account of trouble with his eyes.

John W. Cowen, formerly superintendent of the Angola schools, this State, but for several years of Dakota, and recently Territorial Superintendent of the northern part of the Territory, died early in February.

Jesse H. Brown, Superintendent of Drawing in the Indianapolis schools, has recently suffered an inexpressible loss in the death of his estimable wife. He will doubtless have the hearty sympathy of his numerous friends.

➤ W. N. Hailman, Supt. of the LaPorte schools, owing to ill health, has been compelled to abandon the project of holding a Normal School of Primary methods at LaPort next summer as advertised. This is much to be regretted.

F. S. Belden, western agent for Cowperthwait & Co., who has had his office at 153 Wabash avenue, Chicago, will remove to new and more commodious quarters at 184 Wabash avenue where he will be glad to see his friends.

S. M. Rutherford, last year in the Thorntown public schools, is teaching this year in the public schools of Lebanon. Mr. Rutherford is devoting considerable time to microscopy and is destined to make his mark as a biologist.

D. S. Jordan, President of the State University, has been offered the presidency of Iowa University, at a salary of \$4,500. The Journal is glad to say that Dr. Jordan has not as yet accepted the place. Indiana can not afford to lose him.

S. E. Miller is serving his twentieth year as superintendent of the schools at Michigan City and not the nineteenth as stated in February Journal. Mr. Miller thinks the citizens of Michigan City should have due credit for their patience and forbearance.

J. G. Scott, who has for seven years been identified with good work in the schools at New Providence, part of the time in Borden Institute, will sever his connection with these schools in March. Though not leaving Indiana, report says he is about to enter a new "state."

➤ Mrs. Mary Mann, wife of Horace Mann the apostle of education in this country, died at her home near Boston, Mass., Feb. 12, at the age of eighty-eight years. This brings to mind the man who has done more for education in America than any other man, living or dead.

John Cooper, formerly of Evansville, now of Leavenworth, Kan., is reported as endeavoring in every legitimate way to work up a professional spirit among his teachers. His aim is, through such efforts, to make the school work thoroughly practical, fitting boys and girls to go out in the world and do good, honest, careful work from the start.

A. M. Sweeney, Supt. of Dubois county, late candidate on the Democratic ticket for State Superintendent, has just issued some testimonials and statements refuting erroneous charges made against him

during the campaign. The Journal is entirely satisfied that Mr. Sweeney, since he has held the office of County Superintendent, has not perverted public money to uses in church schools, has not discriminated against protestant teachers, has not allowed sisters of the Catholic schools to teach in public schools without license, has not in any way violated the law governing his official action. The evidence to this effect is conclusive.

BOOK TABLE.

TREASURE-TROVE is the name of a juvenile publication issued by E. L. Kellogg & Co., New York. It ranks with the best of its kind.

THE NORMAL GEM is the name of a small weekly folio published in the interest of the Normal School at Hope, of which J. F. W. Gatch is principal.

THE NORMAL MONTHLY is the name of a bright 3-column 12-page paper just started by Lugenbeel & Sutherland, principals of the Normal School at Mitchell. The first number looks very attractive and seems well calculated "to supply a long-felt want."

LITTLE SPEECHES FOR LITTLE PEOPLE is the name of a little paper-covered volume containing sixty selections, published by Charles A. Bates, Indianapolis. Price, 10 cents. The pieces are simple and adapted to the understanding of those for whom they are intended.

THE INTER-STATE TEACHER, published at Covington in the interest of the Normal School located there, has changed its name and its editor, and is talking of changing its dress. It is now called the *Normal Teacher* and is edited by J. V. Coombs, principal of the school.

HARPER'S MAGAZINE for 1887 turns public attention and thought in two direct lines; one toward Russia, and the other toward the Southern States as they were and are. In the former line, "Narka," a Russian novel has been running since January. To supplement this in the March number is a paper entitled, "Russia of To-day," by Albert F. Heard. The series of articles by Chas. Dudley Warner on the South is supplemented by an article on "A Louisiana Sugar Plantation of the Old Regime," by Charles Gayarré. Monsieur Gayarré writes from personal experience.

PHYSICAL GEOGRAPHY: By Arnold Guyot. Revised. New York. Ivison, Blakeman, Taylor & Co. John C. Ellis, Chicago, Western Agent.

This is not a *new* book, but by revision it has been kept abreast the most advanced geographical thought. It has been recognized as a standard authority for years on this important branch of learning, and up to date no book on the subject stands higher. There is always an advantage in using a book whose author is authority on the subjects of which he treats. This book, as stated above, is old—yet new as the newest.

ELEMENTS OF ALGEBRA: By G. A. Wentworth. Shorter course. Boston: Ginn & Co.

This shorter course of Wentworth's Algebra is designed for schools that have not sufficient time for the author's full course. It contains, however, a full treatment of the topics usually found in an elementary

algebra. It proceeds so gradually from the easy to the difficult and more difficult, that there is no opportunity for discouragement on the part of the pupil, but there is inculcated a love for the subject which is lasting. An introduction, only to be binomial theorem, is found in the closing chapter. This book is one of the best.

CAMPBELL'S ECONOMIC SCHOOL REGISTER: Published by Burrows Bros., Cleveland. O.

In every walk in life, system is desirable; but in the showing of school results, it seems absolutely necessary. School records are of great service to many public officers, while at the same time they show to the people who support the schools that a good work is being done. To keep these records and furnish these statistics with least labor and expense this school register has been prepared by M. S. Campbell, Prin. of High School, Cleveland, O. Its great value is its simplicity and its convenient form. Burrows Bros. publish, also, Campbells Examination Record, which is of convenient form and size. The Register can be obtained for 75 cents, and the Examination Record for 25 cents.

LATIN WORD-BUILDING: By Chas. O. Gates, A. M., New York: D. Appleton & Co.: Chas. E. Lane, Chicago, Western Agent.

The object of this book is to enable pupils to translate Latin more readily than they are enabled to do by the ordinary teaching. The plan is to select some word from which are made a large number of derivations; first learn the exact meaning of the root-word, then acquire the definitions of the more common words derived from this root word, and finally put in practice the information thus gained by translating sentences illustrating these words. It is believed by the author that thorough drill in such exercises will render a pupil able at all times to apply to the translation in hand all the knowledge he possesses without hesitation.

BUSINESS NOTICES.

DePauw Normal School.—Attention of readers of the Journal is called to the page advertisement of this school. A special effort will be made to meet the wants of those who go to school this spring to review, to improve themselves for the coming year's work, and to get practical help to enable them to teach successfully. The work done last spring commended itself to those who attended, and quite a number will return this spring. One of the good features of the work is that it counts on the regular course, if the pupil desires to go on. DePauw is determined to stand among the best schools of the country, and will spare no pains to do first-class work. Information cheerfully furnished 3-11.

DIPLOMAS.—Names of graduates in Old English or German Text, filled in with pen in good style. Also, *Short-hand* taught by mail. 3 21.

A. O. RESER, La Fayette, Ind.

SALESMEN WANTED!—Salary and expenses paid! For terms and particulars address (mention this paper) W. R. McNary & Co., Nurserymen, Dayton, O.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

In the advertisement of Houghton, Mifflin & Co., last month, the price of David Copperfield was printed 28 cents instead of \$1.28.

HOME STUDY.—Latin and Greek at sight, use the "Interlinear-Classics." Sample page and Catalogue of School Books, free. C. DeSilver & Sons, No. (Y) 1102 Walnut street, Philadelphia, Pa. 2-6.

WANTED.—115 teachers, superintendents, professors, &c., Free Registration. Liberal cash pay to all who will work for us. American College Directory and U. S. Public School Directory, free to teachers. Address, with stamp, C. H. Evans & Co., Managers, AMERICAN TEACHERS' BUREAU, Evans Buildings, St. Louis, Mo. 2-21.

TEACHERS WANTED!—Of all kinds. Principals, and Assistants; also several for Art, Music, etc. Application-form and information free. Address: THE CORRESPONDENCE UNIVERSITY, Chicago, Ill. 5-17

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ills. 1-11.

TEACHERS! Our New School Aids are used for conducting day schools in good, quiet order. A set contains 230 large pretty chromo excelsior, credit and merit cards, elegantly lithographed in ninety different designs, colors and mottoes. Price per set \$1; half set, 115 cards, 50c. 800 new, brilliant designs chromo school reward, diploma, friendship, scripture, wedding, birthday, Christmas, new year, prize, fine gift cards, school reports and teachers' supplies. Large set samples, 30c.; half set, 15c. Price list free. All postpaid by mail. Stamps taken. 1-31. 9-71. FINE ART CO., WARREN, PA.

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Parlor Cars are run on day trains. New Reclining Chair Cars and Pullman Sleeping Cars on night trains. These are a great luxury and comfort to passengers taking long journeys. Connections are made in Union Depots whenever changes are necessary; thus transfers are entirely avoided.

The VANDALIA affords comfort and fast trains to passengers holding second-class tickets. Baggage checked through from starting point to destination. Round trip tickets to all important land points are regularly on sale, and are sold at a reduction from one-way rates.

Information regarding the line, through car service, rates of fare, etc., will be cheerfully furnished upon application to any agent of the company, or

H. R. DERING,

Assistant General Passenger Agent,

48 W. Washington Street,

INDIANAPOLIS, IND.

DePauw University Normal School

265

SPRING TERM, MARCH 30 TO JUNE 18, 1887.

FACULTY.—President of the University, Alexander Martin, LL. D. Dean of the the Normal School and Professor of Didactics, S. S. Parr. Professor of English, Arnold Tompkins. Professor of History and Political Economy, William H. Mace. Professor of Mathematics, Mrs. Jennie S. Tompkins.

SYNOPSIS OF COURSE OF STUDY.—Time required to complete the Latin Course, 3 years and 2 terms; time for English Course, 3 years. The Latin Course enters the graduate sophomore and enables him to complete the College Course in 3 years. The following subjects are each one term studies: Physiology, Botany, Zoology, Observation of School Work, Study of School Organization and Government, Philosophy and History of Teaching, Construction of Discourse, and Chronological Method of Language Work. The following are two-term studies: Drawing, Geometry, Physics, Chemistry. The following are three-term studies: Educational Psychology, Arithmetic, U. S. History, General History, Grammar, Rhetoric and Geography. Grammar is made the study of the sentence; Rhetoric, that of Discourse; and the Geography comprises Mathematical, Physical and Political. Algebra is a four-term study and Latin a seven-term study.

FIRST TERM'S WORK.—(This will be, in the main, the Spring Term's work.) Drawing, or some substitution. Arithmetic, decimal system, its classification, properties and reductions; U. S. History through the period of the Revolution; the Sentence, its analysis, and the classification of language forms; Geography, mathematical and isothermal zones. For Spring Term Class, if deemed desirable, each subject will be closed with an outline of the whole subject.

NEXT YEAR.—Fall Term begins September 15, 1887.

SYNOPSIS OF PROFESSIONAL WORK FOR SPRING TERM CLASS.—Work will, in part, be lecture and the dictation of notes and, in part, recitation. Topics treated: Outline of the School System; Outline and Illustrations of Workings of Mental Faculties in Study and Recitation; Sketch of School Organization; Leading Principal of School Government; Preparation of Lessons by Teacher and Pupil; Assignment of Lessons; the Recitation; How to Secure Attention; Examinations; Tests of Work. This outline will be the order of work.

SPRING TERM CLASS.—Designed to be a review of the common school subjects, doing the regular work of the course, except the professional work above and the outline of the various subjects, or those who can attend only one term or only part of the course, it will be suited. For those who desire to go on, it will count on the regular course. Every pains will be taken to meet the wants of those who attend.

TUITION FREE.—No tuition of any kind is charged. The only charge is an incidental fee of \$5.25. Other cost: Board, \$2.00 to \$2.75 per week. This is not half-fare but good board; room rent, 40c. to \$1.25 per week, furnished with heat, light and all, except in case of the cheapest. No extras, as in many schools. Private board cheap. Clubs plentiful. Self-board for those who desire it, but it is not generally considered profitable. Reduced rates on most railroads.

SPECIAL ADVANTAGES.—Part of a great University; instructors specialists; large libraries free; good laboratories; cabinets; lectures and entertainments; good opportunity to profit by residence in a college community; advantages of the presence of other schools; offers special advantages to high-school and college graduates.

Information cheerfully given. Address,

S. S. PARR,

GREENCASTLE, IND.

Southwestern Normal School,

FORT BRANCH, IND.

Spring Term opens April 5th. - - Summer Term, June 14th.

A SCHOOL FOR TEACHERS

Combining recreation and a study of principles and methods, or offering advanced courses of study. To those who desire to acquaint themselves with advanced methods of Primary and Intermediate work the school affords excellent facilities. Model schools for observation are in session during the terms.

A SCHOOL FOR STUDENTS

In regular or special lines of study. Special advantages are given in the Languages, Mathematics, Sciences, Elocution, Commercial Forms and Music.

SPECIAL FEATURES—Training classes in Primary and Intermediate Work. School of Methods. Physical Training. Manual Training.

DEPARTMENTS—Preparatory, Teachers', Collegiate, Elocution, Music, Medical, Commercial, Phonography, and Type Writing.

EXPENSES—Actual cost for any term of ten weeks, including Board, Tuition, and Room Rent, \$27.50. For summer term of six weeks, \$16.50.

Write for catalogue, or other information. Address,

JOHN W. RUNCIE,

3-11.

Principal.

WHAT SCHOOLS have better music than those that use the sterling good

SCHOOL MUSIC BOOKS

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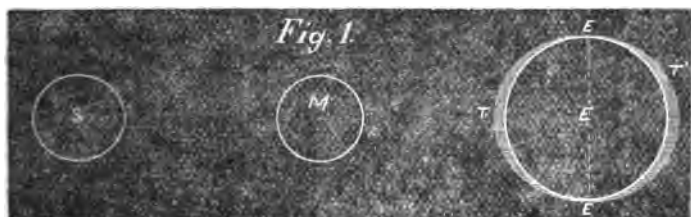


THE TIDES.

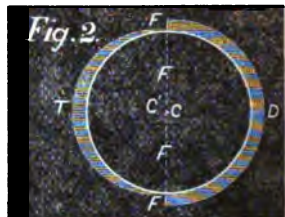
M. L. HOFFMAN, INDIANAPOLIS HIGH SCHOOL.

THE author does not claim to be the first inventor and publisher of the following theory of the tides, but he does claim that he had the theory worked out in its present form, and that he used it in his class-room some time before he knew that such a theory had ever been thought of before. He afterwards found essentially the same thing in Prof. Newcomb's Popular Astronomy, and is informed by good authority that it may be found in several other text-books.

Before giving the statement of the theory it is desirable to notice one other theory which appeared in the *New England Journal of Education* for Sept. 16, '86, which shows, all too plainly, that its author has a very vague idea of the first principles of Physics, and of the workings of the solar system. This writer goes on to say that it is easy enough to see how the moon can raise the tide on the side of the earth towards the moon, but that the commonly accepted theory did not make clear to him the cause of the tide on the opposite side of the earth. This he proceeds to make clear, as he thinks, by stating the following theory:—



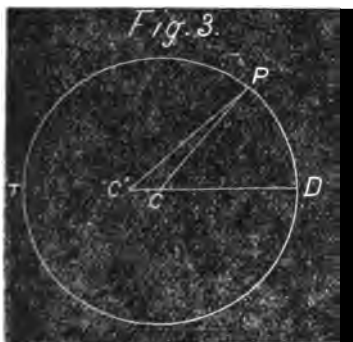
"I have never felt satisfied with the explanation commonly given the causes for the occurrence of the tides on the opposite side of the earth from the moon, the disturbing element that is supposed to cause the tidal wave. To the theory that the moon (M), and the sun (S), acting together, would tend to draw the water toward themselves, and thus theoretically to form a tidal wave directly



under the attracting bodies, few, if any, would object. But to say that the same attracting force that causes a tide at T, (Fig. 1), draws the earth, E, away from the water on the opposite side, and thus leaves the water to appear as a tide at T', does not seem reasonable. To make that true there would be need of a post out in space, somewhere beyond T', to which the water could be hitched in some mysterious ways? It would be better reasoning to say that after the water had been drawn together into the tide wave at T, on one side of the earth, there was left, theoretically, a zone or circuit around the earth, E E E, of water made shallower by reason of the quantity of water having been drawn to T from that hemisphere. Without any further operation of the laws of nature, the water would be supposed to stand as T in Fig. 2; a tide at T, with the water growing somewhat less deep to F F F F, because of its having been drawn toward T, and the water on the other hemisphere, F D F, of an even depth. Of course the equilibrium that has been thus disturbed must be restored, and 'as every particle of water attracts every other particle', etc., etc., the water tends to collect around its central point, D; for the attraction of the different particles for each other would cause the water to come together, and form the tide at T, Fig. 1. In order that the theory might be put forward in the plainest terms, the sun and moon have been considered as acting in conjunction."

This author seems to think that water attracts, and is attracted by water *only*, and that it does not attract other substances, and is not attracted by them. Such, evidently, is not the case. The fact is, that the solid earth attracts the water more than the water attracts the water. For, the attraction of bodies for each other

is as their mass, and the mass is as the density, other things being equal in each case, and, since the solid earth is more dense than the water, it is evident that a certain volume of solid earth will exert a greater force of attraction than an equal volume of water. Therefore the solid earth attracts the water more than the water attracts the water. Now a surface of water on the earth, if it have its equilibrium disturbed, will restore that equilibrium by adjusting itself with reference to the center of gravity of the whole earth, and *not* with reference to the center of gravity of the body of water. The equilibrium will be restored when the surface of the water is everywhere equally distant from the center of gravity (The spheroidal form of the earth is not taken into account, since it will not affect the argument.) In the supposed case, represented in Fig. 2, the flowing of the water towards the point T, would evidently move the center of gravity from D towards T, and D would be farther from the center of gravity than any other point on that hemisphere of the earth. Now since D is farther from the center of gravity than any other point on that hemisphere, in other words, since D is the highest point, and the surface gets continually lower as we go from D towards the supposed zone of depression, it is evident that the motion of the water would be from D towards the zone of depression. Thus the supposed case of the author would actually give a low tide at D, and not, as he concludes, a high tide.



which equals the broken line $C'C + C'P$, and this is greater than the straight line $C'P$, which is the distance of the center of gravity from P. A state of equilibrium can be caused in one of two

It is easy to prove that the movement of the center of gravity towards T would affect D more than any other point on that hemisphere. For in Fig. 3, let C be the center of the earth, and C' the center of gravity after being moved from D towards T. The distance of the center of gravity from D, is the line $C'D$,

ways only, viz., by the absence of all force, or by the equality of at least two opposing forces. Since the force of gravity is everywhere present throughout the solar system, and without doubt throughout the universe, it is evident that states of equilibrium can not be caused by the absence of all force, but that they must be explained by supposing an equality of opposing forces. If the waters of the ocean were in a state of equilibrium there would be no waves, currents, tides, or other motions; but as a great variety of movements actually exist it is evident that the equilibrium of the waters of the ocean is continually disturbed, this disturbance giving rise to motions which tend to restore that equilibrium. This paper has nothing to do with any motions, excepting the tides, and therefore will confine itself exclusively to them.

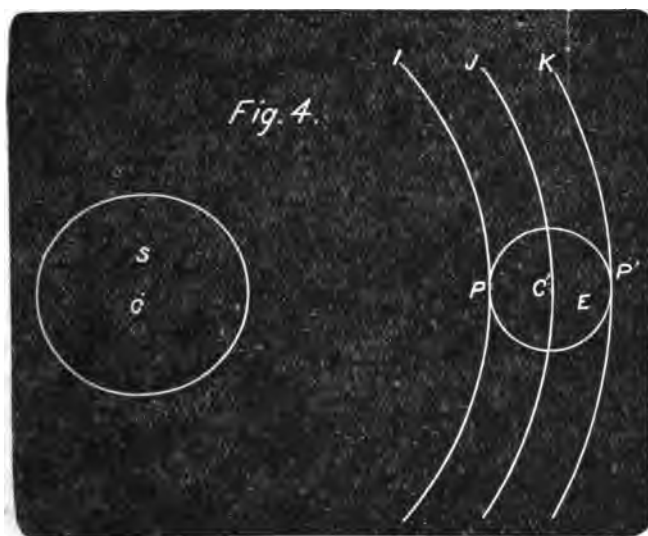
Since the equilibrium of the ocean, if it existed, would be due to an *equality* of the resultants of the several opposing forces, it is evident that the disturbance must be due to an *inequality* of the resultants of the several opposing forces. The forces to be considered here are the attraction of the sun and moon on the earth, and the centrifugal force, due to the revolution of the bodies around their common center of gravity, the mutual attraction of these bodies acting in opposition to their centrifugal force. The author believes the inequality of these forces, in different parts of the earth, to be due to two things; one a difference in the attractions of the sun and moon on opposite sides of the earth, and the other a difference of centrifugal force on opposite sides of the earth.

The statements of the theory, as given in our text books on Physical Geography, are necessarily unsatisfactory from the fact that in all of them, so far as the author's experience goes, the attempt is made to explain the tides by considering an inequality of one force *only*, that force being the mutual attraction of the bodies for each other. The author has already stated that it will be necessary to consider at least two opposing forces, and it will be found that the disturbance is due to the fact that those forces are more or less out of balance in different parts of the earth. The statement, as given in the *Encyclopedia Britannica*,

is elaborate and scholarly. The opposing forces are both considered here, but the statement is made that the disturbing force is due *only* to the difference in the attraction of the sun and moon on opposite sides of the earth, and that it is due *only* to this *because* the centrifugal force is the *same* for all points of the earth. It will be shown farther on that the centrifugal force can not be the same for all points of the earth.

It is a law of Physics, that every force produces its effect, whether it acts alone or together with other forces. In accordance with this law, when we wish to explain the influence of the sun upon the earth, we may consider those two bodies as acting alone, and when we wish to explain the influence of the moon and earth upon each other, we may consider them as existing separately. When we have ascertained the effect of each, and just how that effect is produced, then it will be easy enough to combine those effects. Many different forces may produce modifications of the tides, but they will not affect the principle which explains the primary cause of the tides.

SOLAR TIDES.



Let s be the sun, e the earth, c the center of the sun, and c' the center of the earth. Let P be a point on the side of the earth

nearest the sun, and P' a point on the side of the earth away from the sun. Let ijk be parts of the orbits in which these different points of the earth move.* The center of gravity of the two bodies is practically at c , the center of the sun. As these bodies swing round their common center of gravity, the earth, on account of its comparatively small mass, goes around in a large orbit, while it just sways the sun a little as it goes around.

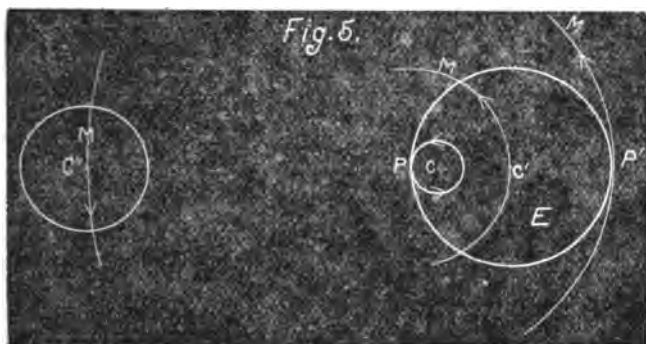
Since the diameter of the earth is 8,000 miles, the point P' moves in an orbit which is 16,000 miles more in diameter than the orbit of P , and 8,000 miles more in diameter than the orbit of the center, c . This makes a difference of over 50,000 miles in the orbits of P and P' . Yet all these points describe their orbits in the same time, therefore P' moves faster than the center c , and P moves slower; c moves when the centrifugal force just balances the gravitation towards the sun. All other points have their centrifugal force more or less out of balance with their gravitation towards the sun, but they are held in place by their greater gravitation towards the center of the earth. All points of the earth, on the hemisphere away from the sun, have their centrifugal force greater than their gravitation towards the sun, and hence, if free to move will go to the farthest possible point from the center of revolution, and that point is P' . All points on the hemisphere towards the sun will have their centrifugal force less than their gravitation towards the sun, and if free to move, will go to the nearest possible point to the sun, and that point is P . It will be seen that a tide at P' and P are thus accounted for, even if the gravitation of both sides of the earth towards the sun were equal. But, since all points on the hemisphere towards the sun are nearer the sun than those on the other hemisphere, their gravitation towards the sun will be greater, and this will augment the tendency of any point on the hemisphere towards the sun to move to the point P . And, since all points on the hemisphere away from the sun are farther from the sun than those on the hemisphere towards the sun, their gravitation towards the sun will be less; and since there are here two forces acting in opposite directions, the one to, and the other

* Their relative sizes are not represented.

from the sun, it is evident that to diminish the force, acting towards the sun, would have the same effect as to increase the force acting away from the sun.

Thus it is shown that the solar tides are due to two things: 1, a difference of centrifugal force on opposite sides of the earth, and 2, that this effect is increased by a difference of attraction on opposite sides of the earth.

LUNAR TIDES.



In a similar manner the lunar tides may be explained. Let M be the moon and E the earth; c their common center of gravity, c' the center of the earth, P the point nearest the moon, and P' the point farthest from the moon. If all other bodies were removed the earth and moon would swing, mutually, around their common center of gravity. This center is about 1,000 miles below the earth's surface, on the side towards the moon, 3,000 miles from the earth's center, and 7,000 miles from P' , the point farthest from the moon. As the two bodies swing around, the point P' moves in an orbit 14,000 miles in diameter, the center c' in an orbit 6,000 miles in diameter, and the point P in an orbit 2,000 miles in diameter.

Since all these points make one revolution in the same time, P' moves faster than the center c' , and c' moves faster than P , while c , being the center of revolution, does not move at all. The center of the earth, c' , has its centrifugal force just equal to its gravitation towards the moon. All other points have their centrifugal force more or less out of balance with their gravita-

tion towards the moon. All points beyond c' , from the moon, will have their centrifugal force, acting away from the moon, greater than their gravitation towards the moon, and hence, if free to move, as water is, will go towards the farthest possible point from the center of revolution, and that point is P' . All points between c' and c will have their centrifugal force, acting away from the moon, less than their gravitation towards the moon, and hence will tend to move towards the nearest possible point to the moon, and that point is P . All points between c , the center of revolution, and the moon, will tend to go towards the point P with all the force of the moon's attraction, plus the centrifugal force, here acting towards the moon. Here it is seen again that tides at P and P' are accounted for, even if the moon's attraction were the *same* at both points.

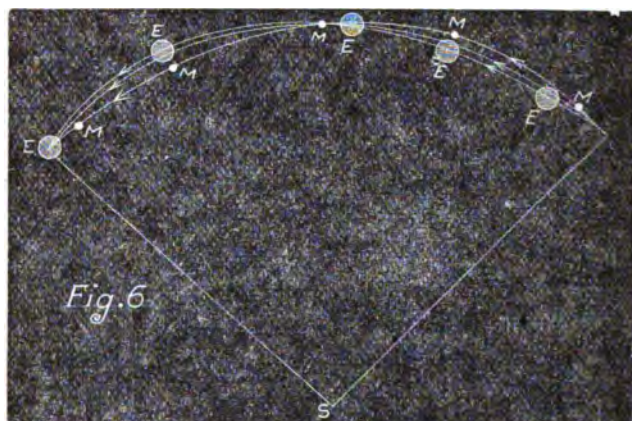
But, since all points on the hemisphere towards the moon, are nearer the moon than points on the opposite hemisphere, they will be more strongly attracted by the moon than points on the opposite hemisphere, and this will augment the tendency of points, on the hemisphere towards the moon, to go towards the point P . Points on the hemisphere away from the moon will be attracted less by the moon than points on the side towards the moon, and as there are here two forces acting in opposite directions, the one towards and the other from the moon, it is evident that to make the one acting towards the moon less, will have the same effect on their results as to increase the one acting away from the moon. Hence the diminished attraction of the moon on the hemisphere away from the moon augments the tendency of points on that hemisphere to go towards the point P' . Thus it is seen again that the lunar tides, as well as the solar tides, are due to a difference of centrifugal force in different parts of the earth, together with a difference in the gravitation of the different parts of the earth towards the moon. The centrifugal force, and mutual attraction of the bodies for each other produce a state of equilibrium only in a plane, passing through the center of the earth, and perpendicular to a line joining the centers of the two bodies. At all other points of the earth these forces are more or less out of balance, and they are out of balance most of all at the points P and P' .

The lunar tides will be greater than the solar tides, 1, because the difference in the orbits described by the points P and P' will be much greater in the revolution about the common center of gravity of the moon and earth than it will in the revolution about the common center of gravity of the sun and earth. In the revolution about the common center of gravity of the moon and earth this difference amounts to over 50,000 miles in one lunar month, and in a year it would amount to about 650,000 miles. In the case of the solar tides it is only about 50,000 miles in a year. 2. The moon being so very near the earth gives a greater difference in its attraction on opposite sides of the earth than exists in the sun's attraction.

When the two tides coincide, of course, the tides will be the sum of the two, and this is the spring tide. This will occur when the centers of the three bodies are in line. When the two tides are formed at right angles to each other, the resulting tide will be the difference of the two, and this is the neap tide. This will occur when lines, drawn from the centres of the sun and moon to the center of the earth, will be at right angles to each other.

A very good illustration of how the moon and earth revolve can be given by tying two balls together, and then flinging them into the air. It will be seen that they swing mutually about their common center of gravity. If one ball be made enough larger and heavier than the other, they will swing about a point within the larger ball; then the small ball will swing around in a large circle, while it will just sway the larger ball as it goes around. To put the whole theory in a nut-shell, it is this swaying of the earth by the moon, together with the difference of its attraction on opposite sides of the earth that raises the tides. We sometimes see the orbit of the moon represented as a wavy line, crossing and recrossing the orbit of the earth. This representation is apt to convey a wrong idea. The orbit of the moon as well as that of the earth is always concave towards the sun; it is a curve whose curvature is greater at some places than at others. Just so the orbit of the earth's center is a curve whose curvature is greater at some places than at others, and when the

curvature of the orbit of the earth's center is greatest the curvature of the orbit of the moon's center is least, and the amount of irregularity in the curvature of the orbits is inversely as the masses of the bodies. This irregularity in the curvature of the



orbits causes them to cross each other twice a month. The center of gravity follows the regular curve. Some idea of what is meant may be obtained from Fig. 6.

We might carry this thought a little farther, as it is now known that the sun himself is in motion, carrying the whole solar system with him. Here the center of gravity of the solar system follows the regular curve while the orbit of the center of the sun as the planets swing round him, crosses and recrosses the orbit of the center of gravity. Thus the heavenly bodies go on, weaving their threads of silver and gold, through infinite regions of space, and through endless ages of time.

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R. H. HARNEY.

IN requiring applicants for license to present reviews of certain books, the State Board has made a notable step in an important direction. It is well known that many teachers are able to pass creditable examinations in the common school branches, and yet possess little of the culture requisite to their calling.

Much of the failure in our schools has come from intrusting the office of teacher to persons of no general knowledge and of no information concerning the literary and scientific progress of the age. The evil is too deep-seated to be cured by this, or any other, single remedy. The actual good accomplished by the movement will depend upon the intelligence of county superintendents, and the amount of aid and encouragement given by school men and others who are interested in the promotion of literary culture. The difficulties in the way should be well understood. Many teachers have read no books except text-books: others have sought only amusement in their reading.

If by accident a book from this list has fallen into the hands of one of the latter class, he rated it as good, or bad, in proportion as it conformed to his standard; which standard was taken from some sensational newspaper. Institute instructors have given lists of books that teachers should read; but the names were unfamiliar to the majority of the listeners; besides they knew no reason for reading books that did not affect the license grade. This official step, I presume, proposes to stimulate ignorant and indifferent teachers; or, eliminate them from the profession. It is something new. Teachers ask, "Have you read any of these books?" "Which is the best?" Many no doubt will write summaries of the contents much as the primary pupil tells what he sees in the picture. Others, learning that these books are popular, will labor hard to tell how well they like them. These are the natural steps for beginners. Shall this authoritative effort on the part of the board be so aided that teachers may take other steps until they can see *more* than first appears, and be able to give *good* reasons for liking, or disliking a book. They are aware that there is something in these books that they are expected to learn, but are by no means certain what it is; and are likely to fall into errors in pursuit of it. A teacher, above the average in intelligence, asked why some books of history, biography, or travel were not selected, that the teacher might get some information to aid him in his work!

It is well to know the estimation in which a book is held by intelligent people, but the teacher should know of himself why

a book is good or bad. Children must be told what to read, that they may have proper models and live in a pure literary atmosphere, so that in the end they may grow to know and love what is good. How can a teacher lead others to the appreciation of grand thoughts and artistic work which he does not himself comprehend?

Susan Fenimore Cooper has lately told how an acquaintance of the author complained of the lack of motive in *Harvey Birch*: that he should have received a reward in money to show that he had some object in all his labor! The *Spy* was not written for such critics. The book would long since have been forgotten if it had had no higher type of admirers. It should not be said that the directors of youth must wait to learn the merits of a literary creation from others.

Let us all labor then to make this movement effective in advancing the character of our profession. Let the teachers be told in the beginning that they are not to rewrite things found in the book; are not to tell its story as if to one that had not heard it; but they are to suppose the reader acquainted with the facts, and talk to him of what they both see; as intelligent people talk to each other of the scenes and events within their knowledge.

May I say, then, that the purpose of the State Board is not so much to force the reading of books, and apply tests of the fact, as to lead teachers to higher intellectual enjoyment, and to make them thinkers and critics in the literary field.

The following comments are not offered as a model review; they are the record of impressions made long ago. An embryo book-reviewer may find encouragement from them to tell what he has seen in a book without following any formula.

IVANHOE.

This picture of medieval civilization may lack in the truthfulness of some of its details, but is not thereby made less instructive and entertaining. The author has taken much liberty with the possibilities; he is not always geographically correct, nor faultless in his chronology. The period is a century and a quarter after the Conquest, yet we find distinguished Saxons still lording it over their old castles, and plotting treason, almost

openly, against the Conqueror's descendants. But all this gives us, in the author's best style, descriptions of these same castles and life-like views of the inmates as they ate and drank, loved and fought before the Normans came. We can not complain, either, of the tendency to crowd this kind of information into small space: as, when introduced to an ordinary Saxon meal, we get an enumeration of all the meats and drinks of the whole nation. Owing perhaps to the unsettled state of the language, the author translates the speech of all his characters into the best English of Queen Elizabeth's time. However, the Jews follow closely the style of King James's translators. Whatever opinions a modern may have of King Richard I, he is represented here as the pattern of all chivalry. He exceeds all in physical strength, skill in arms and capacity for carousal. He has every strong quality but discretion, which he is able to do without. In disguise, Richard is already taking part in the tournament at Ashby, under the very eyes of Prince John, when that prince receives the startling information from Philip of France that, "The devil is unchained." John, who must have been somewhat familiar with his brother's appearance in armor, has no suspicion of the real Richard, but is alarmed lest Ivanhoe be he. This Ivanhoe, the hero of the story, Richard's Saxon follower, is scarcely second to the King in knightly prowess; but somehow, to the reader, there is something lacking in him. His superiority is not sufficiently accounted for. He seems to be a forced growth from the author's hot-bed.

The Church, in very great straits since the Norman conquest, is apparently as bad as ever. A debauchee, and companion of outlaws, Friar Tuck,—

"Himself, in epitome, proving the truth
Of the world, the flesh, and the devil,"

is not so worthy of scorn as the high prelate, Prier Aymer. Speaking of these bad representatives of the Church, one is reminded that the outlaws, under their leader, the genuine Robin Hood, are a very respectable lot of people. They are always on the right side, and seem to have perfected a higher system of ethics than anybody else. The Knights Templar do not fare

so well at the author's hands. They appear in about the character of a modern Jesse James gang, with some additional roughness, owing, no doubt, to the times. The representative Saxons do not command unmeasured admiration. One of them seems to be in a chronic state of indigestion, while the other is good for nothing but digestion. The servants are better than their lords. For the sake of Gurth, the swine-herd, and Wamba, the fool, we may forgive their master. These two lowly ones are introduced as philologists, and furnish us food for thought in their lamentations over the fusion of Norman and Saxon speech. Gurth develops into a self-sacrificing hero, the most interesting, perhaps, of all the characters. Wamba distinguishes himself in several feats of arms, but is mainly useful in furnishing discretion and common sense to his master, as well as the hot-headed King. The heroine, a descendant of the Saxon kings, though beautiful and devoted, is not a very impressive character. She is completely overshadowed by the interest in Rebecca, daughter of Isaac of York, who notwithstanding the general massacre and despoilation of the Jews at the beginning of Richard's reign, seems remarkably prosperous, and oscilates between charity and avarice at the pleasure of the author. Rebecca is a character without flaw. Critics have said she should have been the heroine and should have been loved by Ivanhoe, as she loved him. I think the author's greatest triumph is in successfully resisting such a temptation. Such an arrangement would have been a greater violation of the proprieties than bringing the hungry Athelstane back from the dead.

The book is best in its fierce conflicts; or, in its descriptions of people and manner of living. Many important scenes fail of interest. Cedric's dining room is not improved by the strangely assembled guests. Prince John's banquet, though boisterous enough, is tame to the reader. Ulrica on the turret of the burning castle fails in dramatic effect. Athelstane's return seems only a burlesque; while the withdrawal of the Grand Master of the Templars and his band from the presence of Richard, becomes less and less impressive with the reading.

A WRITTEN EXAMINATION.

ANNA C. BRACKETT.

I SAID that we had "almost no written examinations" in this school. I append a series of questions which I made out a short time ago for one of the older classes who, in the course of their English Literature, had been required to read the "House of the Seven Gables, as one specimen of Hawthorne. I should say that all reading in our Literature classes is done out of school, the time of the recitation being spent in discovering what they have read, and in leading them by judicious questions to read intelligently and to know what to look for as they read.

The class was not mine, and they had taken so short a time to read the book, according to the report of the teacher, that it seemed to me they could not have got from it as much as they should. I gave them the following questions to ascertain how much they had seen in the book. The answers were satisfactory. I read them through, but did not mark them. They simply decided me to say to the teacher, "All right; go ahead." If they had not been satisfactory, I should have had the girls take home a copy of the questions, and answer them again, *consulting the book freely*. When they brought me the second set of answers, I should have been sure that they had gained what I wanted them to have—an intelligent idea of Hawthorne's style and of the story. I don't think that I should have spent much time over the second set of answers, I should have been so sure that they knew about the book.

I think that I am willing to advance the proposition that no set of examination papers for children is really a good one, or can answer a useful purpose, unless we are willing to have the questions answered from open books. Any set which is really worth giving, would involve, to answer them, so much hunting on the part of the pupil that he would, at the end, have accomplished what I want him to accomplish. The examination paper, if given to children, should be a *means* and not an *end*.

I submit the questions, and await criticism:—

1. Would you call Hawthorne a humorist, a satirist, a caricaturist, or a moralist, or neither, or all? Why?

2. What *object* does he seem to you to have had in writing "House of the Seven Gables?"
3. Tell what scenes in it you think the most touching?
4. What do you call the characteristics of his English? Is it strongly marked?
5. Is it like the style of any other writer you know of? If so, who, and in what?
6. Could any parts of the book be called poetical? If so, in what scenes?
7. Does the book seem to you a *great work*, or only a *pleasant work*?
8. Who is the finest character in it?
9. Is Hawthorne a fine drawer of character, i. e., do his characters seem to be real people, or only descriptions? Give illustrations.
10. Does he let you see the mental processes of the personages, or give you only the *results* of those mental processes and leave you to judge the thoughts of the *personages* by their actions?
11. Does the ending of the story satisfy your sense of justice to every one in the story?
12. Is there any character that could have been left out without breaking the story?
13. How many distinct characters in it?

—*American Journal of Education.*

THE BENEFIT OF LAUGHING.—Dr. Greene, in his "Problem of Health, says there is not the remotest corner or little inlet of the minute blood-vessels of the human body that does not feel some wavelet from the convulsion occasioned by good, hearty laughter. The life principle, or the central man, if shaken to its innermost depths, sends new tides of life and strength to the surface, thus materially tending to insure good health to the persons who indulge therein. The blood moves more rapidly, and conveys a different impression to all the organs of the body, as it visits them on that particular mystic journey when the man is laughing, from what it does at other times. For this reason, every good, hearty laugh in which a person indulges tends to lengthen his life, conveying, as it does, new and distinct stimulus to the vital forces. Doubtless the time will come when physicians, conceding more importance than they now do to the influence of the mind upon the vital forces of the body, will make their prescriptions more with reference to the mind and less to drugs for the body; and will, in so doing, find the best and most effective method of producing the required effects upon patients

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

SHORT NOTES.

THEREFORE.

MANY pupils use the word *therefore* without having any idea of what it means. "One barrel of flour costs \$7.50, therefore 12 barrels will cost twelve times \$7.50." The pupil does not see that the "therefore" means *because the foregoing is true*. The teacher should see that he knows just what he means when he uses the word.

GUMPTIONLESS.

Having children count commas in the reading lesson to keep them busy during the study hour.

Having children *guess* how to spell a word. "Well, spell *at* it," is what is sometimes said. If a child knows he doesn't know how to spell the word, he has made one step in the right direction.

THE WAY THEY STUDY.

A knowledge of arithmetic, grammar, and geography does our pupils little good; it's *the way they study these branches* that benefits them. A walking encyclopedia is usually a walking nuisance. I wouldn't entertain a human grammar at my house. His room and food would be better than his company. We have a great many "educated" men who are by no means popular. They know enough—too much, but they haven't *human* qualifications to meet *ordinary* men and women. I shook hands with a human algebra on Broadway a few days ago. The meeting wasn't pleasant. We don't eat or wear binomial theorems or quadratic equations.

We make our pupils too bookish. The ordinary good student is likely to ask you some question he knows you can't answer in order to give him a chance to tell you what he knows. Bury the algebra! burn up the arithmetics! annihilate the geographies! if by their use we are to *make* students who are continually thrust.

ing their bookish trash into the faces of the world.—*N. Y. School Journal*.

THE CENTER OF POPULATION.

The center of population of the United States is steadily moving westward at the rate of about 50 miles every ten years. The following is the center point at each census:

- 1790—22 miles east of Baltimore.
- 1800—18 miles west of Baltimore.
- 1810—40 miles northwest of Washington.
- 1820—16 miles north of Woodstock, Va.
- 1830—19 miles west by southwest of Moorfield, W. Va.
- 1840—16 miles west of Clarksburg, West Va.
- 1850—23 miles southeast of Parkersburg, West Va.
- 1860—20 miles south of Chillicothe, O.
- 1870—48 miles east by north of Cincinnati, O.
- 1880—8 miles west by south of Cincinnati, O.

“BROAD WORK.”

This is a favorite term with many teachers. Just what is meant by it is not always easy to tell. It *seems* to mean *scatter* to some. When such persons are teaching U. S. History and a topic that relates to anything that occurred during the Elizabethan Age, comes up, they proceed to give an *extended* account of the great literary characters of the age and the effect they have produced on the world since. A class of beginners thus taught will have no practical knowledge of either English or U. S. History. Their knowledge is in a chaotic state; it needs organizing. The “law of unity” has been violated. “Broad work” should mean the teaching enough of the collateral to make the work in hand intelligent to the pupils.

NOT IN THE TEXT.

Shall we give a question that can not be answered from what is in the text, when we are examining a pupil for promotion?

In a popular grammar is this sentence: “The Mayflower brought to America one hundred and one men, women and children.” It seems fair to ask, “What was the Mayflower?” for no pupil could have a proper understanding of the sentence without being able to answer this question. The question should be given in connection with the sentence, of course. It certainly would not be fair to ask how many masts the Mayflower had.

READING LESSON.

THE WORLD.

- I. Great, wide, beautiful, wonderful world,
With the wonderful water round you curled,
And the wonderful grass upon your breast—
World, you are beautifully drest.
- II. The wonderful air is over me,
And the wonderful wind is shaking the tree,
It walks on the water, and whirls the mills,
And talks to itself on the top of the hills.
- III. You friendly Earth, how far do you go,
With the wheat-fields that nod and the rivers that flow,
With cities and gardens, and cliffs and isles,
And people upon you for thousands of miles?
- IV. Ah, you are so great, and I am so small,
I tremble to think of you, world, at all;
And yet, when I said my prayers to-day,
A whisper inside me seemed to say,
“You are more than the Earth, though you are such a dot;
You can love and think, and the Earth can not.”

The above is taken from a Third Reader. The following questions were placed on the black-board before the class, and they were required to write answers on their slates. It will be observed that the questions are such that they can be answered only by a close reading of the lesson. In the recitation that followed this work, the pupils read their answers before they were asked to read in their books.

1. What is meant by *the world*?
2. What is the *wonderful water*?
3. With what is the world dressed?
4. What walks upon the water?
5. How does it do this?
6. What kind of mills does it whirl?
7. How can it talk to itself on the top of the hills?
8. How can wheat-fields nod?
9. What are cliffs? Isles?
10. What can you do that the world can not do?

Such questions serve to direct the study of the pupils. They study for something. Much time is often wasted in the study of reading. It is a mere killing-time process. The pupil simply sits and looks at the lesson. The reading from the book after these questions are answered, is more intelligent because it means something to the pupil.

HOW FAR SHALL I HELP THE PUPIL?

It is always a very difficult question for the teacher to settle, "How far shall I help the pupil, and how far shall the pupil be required to help himself?"

But it is a very great evil if the pupils acquire the habit of running to the teacher as soon as a slight difficulty presents itself, to request him to remove it. Some teachers, when this happens, will send the scholar to his seat with a reproof, while others, with a mistaken kindness, will answer the question or solve the problem themselves, as the shortest way of getting rid of it.

Both these courses are generally wrong. The inquirer should never be frowned upon; this may discourage him. He should not be relieved from labor, as this will diminish his self-reliance without enlightening him, for whatever is done for a scholar without his having studied closely upon it himself, makes but a feeble impression upon him, and is soon forgotten.

The true way is, neither discourage inquiry nor answer the question. Converse with the scholar a little as to the principles involved in the question; refer him to principles which he has before learned and now lost sight of; perhaps call his attention to some rule or explanation before given to the class; go just so far as to enlighten him a little, and put him on the scent, then leave him to achieve the victory himself. There is a great satisfaction in discovering a difficult thing for one's self, and the teacher does the scholar a lasting injury who takes this pleasure from him.

The teacher should be simply suggestive, but should never take the glory of a victory from the scholar by doing his work for him, at least not until he has given it a thorough trial himself.

—D. B. PAGE, in *Intelligence*.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

QUESTIONING.

A good teacher must be a good questioner. But it is a great mistake to suppose that all instruction proceeds by questioning. It is no less a mistake to think any kind of questioning will do. Unless something has first been put into the pupil's mind, to be pumped out, questioning is pumping out of a dry cistern. The only thing the pump does well under such circumstances is to wheeze. All that any possible teacher can do, whether in the Banner school or in Timbuctoo, may be reduced to three kinds of effort: 1. To give the pupil material, of one kind or another, to work upon. 2. To direct him what to do with this material, after he has it well in hand. 3. To test him to see whether he has the necessary material or any part of it, or to see whether directions given have been complied with. Thus, the giving of material is illustrated by assigning a number of words to be learned as to spelling, pronunciation, meaning, use, derivation, synonyms, etc.; the directions would include telling what was to be done with the words, where to look for information concerning them, what principles to apply to them, and what results to bring to the class; the testing process includes the spelling of the words, the syllabbling, using in sentences and other similar things the pupils are required to do with them in recitation and in preparation.

Very little can be done at giving materials for work, by questioning, unless, perhaps, the instruction take the form of development lessons. A sharp-shot question is often of use to wake up inattentive pupils, when work is being given. It sometimes becomes necessary to thrust a stick into the bee hive in order to rouse the workers into activity. Questions answer excellently for this purpose. The attention may be directed here or there by questioning, but, sometimes, direct statement is a better means. In all development lessons, questioning must remain the chief instrumentality.

But it is in the capacity of test that questioning becomes most valuable. Testing is by no means confined to pumping out what has already been pumped in. Indeed, those teachers who are mainly engaged in pumping the little pitchers full and then pumping them empty again, miss the best part of the teacher's vocation. They should test to see what the pupil knows and what he needs to know; to find out how he has reached his results and whether they are permanent enough to pass for the genuine gold of knowledge or only for the fool's gold of verbal information.

The first requisite to good questioning, as to other good qualities of instruction, is the substantial working knowledge of the subject taught. If a teacher is sailing through fog-banks in the subject, he will lose himself and his class. There are scores of questions asked classes in school no less nonsensical than to ask some one, Who was the father of Noah's children! To ask, What does the book say about this subject? or What is another quality of the object? or Is the object hard or soft? is like shutting one's eyes and spinning round on his heel to shoot at a flock of blackbirds. Questions must be plain, pointed and direct. There is no recipe, like a housewife's directions for making batter-cakes, for making questions worth one hundred percent of good sense and efficiency. But the first condition of all is that the teacher shall know his subject. Next he must go over each lesson and see that he is able to let light shine through every point of it and how he can make his questions and directions plain. Let him put himself in the children's place and see how it must appear to them. This is the other hemisphere of plain questioning. If the teacher is clear how the subject must appear to the child, he needs no batter-cake recipes. They would only fetter him.

SPELLING.

SPELLING, in the days of the "Old Blue Back," taught the pupil something like four thousand words ranging from *ba, bi, bo, bu*, to *immateriality, indestructibility, indivisibility*, and trusted to Providence for the method of teaching and for the good that

was to come out of it. The method is not obsolete yet, although most teachers feel called upon to deny that they are using any such mummy from the tombs of the past. After all, the log-school-house plan of teaching spelling had its good points. It is true that many of the words taught might never be seen again and that, on the other hand, many of the words the pupil saw every day he was unable to spell, because they were not in his spelling-book. It is likewise true that very little written spelling was used to familiarize the hand and eye together with the form of words, and that often those who spelled well orally, stabbed the English tongue every time they took up a pen. But still, all in all, the old time speller knew the form of his words to the eye better than the modern pupil. What he attempted was, on the whole, taking time put upon it, and opportunity, into account, better done than what his successor of to day attempts.

The modern speller attempts many more things than his old-time fellow. Spelling now is a kind of general-utilities subject, into which are tumbled spelling proper, accentuation, syllabing, capitalization, punctuation, meaning, derivation, synonyms and use. Old-school spelling concerned itself very little with anything except the form of the word as it appeared to the eye and to the ear, and, indeed, its devotees were not always overly nice about pronunciation.

Evidently the ordinary pupil can not take fifty words a day, if they are to be rung through all the changes enumerated above. He would probably have all he could wrestle with if he took five words per day and did them well. Notwithstanding it takes time, every one of the points, except, possibly, in the case of younger pupils, should be done with thoroughness. They are mutually helpful and one may be made to lean on the others. Of course the first thing to be done is to get the form of the word imprinted on the eye and ear and associated with the idea it represents. At first this sounds like the boast of the Irishman who captured six Hessians at the battle of Trenton: he "jist entirely surrounded and tuk thim in." So when one has said that the first thing to be done is to teach the form and association of words, he seems to have "surrounded and taken in" all there is to be

done. But such is not the case. Accentuation, spelling proper, capitals, punctuation, syllabing and the like are modes in which the form of words appears. So, likewise, use derivation, discrimination of synonyms and meaning as a single word are all forms of meaning.

To impress the form of any word on the eye it seems plain that the eye must look at it long and earnestly. The more attention the mind bestows on the looking, the fewer times the word will need to fall on the eye. But a great many repetitions are needed. If the pupil were a Waterbury watch, the teacher might wind him up and set him to going on his spelling-lesson until he had looked at the words often enough to know their forms when he saw them. But he will not wind up in any such way. The only key to his attention is interest. Thus it appears that the more things we can give our little squirmer to do, the more we shall interest him. If, then, this is true, we shall teach spelling better to have eight different things to be done with the words, than to have but one. Each one of these things causes the eye to rest upon the word, and hence imprints its form on the mind, and this all the more effectually, as the mind is cooperating with the eye.

In like manner, to impress a word on the ear, it should be said over a great many times in the hearing of the ear. This is not so easily managed, perhaps, as the use of the eye. But here the usefulness of several different kinds of exercise, devoted to pronouncing, syllabing, giving derivation, use, etc., becomes apparent. We have ample excuse to have the word pronounced many times.

The eye, the ear, and the hand are natural allies. If the eye can see, the ear hear, and the hand do anything, it will be far better impressed on the mind than if it had been acted upon by only one of these senses. This fact is the justification of a large amount of written work. Indeed the more exact and painstaking work the better.

KNOWLEDGE.—It is better to know much of a few things than a little of many things.—*Edward Brooks.*

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

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S P E L L I N G .

THE *ultimate design* in learning to spell is to gain the power to *write words correctly when expressing one's thought*. The principles are four:—

1. Spelling deals with the forms of words, and the eye of the pupil should therefore be made familiar with the forms by repeated observation before he is required to reproduce them in writing.

2. In teaching spelling, the principle that all instruction in the forms of language should be based upon a comprehension of the meaning, should be observed, on the ground that the sense of a word or passage is a stronger and more interesting bond of association than the appearance or sound.

3. Since the pupil learns the spelling of words in order that he may write them, the instruction should be mainly through the art to which spelling is applied in after life, and only subordinated through oral work.

4. Instruction should proceed from the simple to the complex. In the light of these principles the *stages* in spelling are four:—

1. *Copy-work*, the simplest form of spelling.

2. The reproduction, in *dictation exercises*, of words previously learned, a more difficult form of spelling.

3. *The spelling of the necessary words when the thought is fixed upon the idea which is being expressed*, a still more difficult work.

4. *The analysis of difficult combinations with a statement of the reasons for their difficulty*, a work the most complex of the four kinds.

A pupil should be required to copy accurately and readily before he is given the more difficult work of reproducing from memory. "That which we know *thoroughly*," was said by Jacotot, "contains the explanation of the unknown." "The end is in the beginning."

Success in teaching spelling depends upon *thoroughness*. It is not the amount but the manner of doing it. The *vague* forms are to be made perfectly *distinct* forms to the eye *by writing* before passing to others.

To develop power to reproduce from memory: After a word has been copied from the board, erase it, and have it reproduced from memory. Do the same with two words, three, a short sentence, etc. Regulate the work by the pupil's power to do it accurately. Train him to do exactly what he is asked to do.

When he can *copy* and *reproduce readily* and *accurately* he is prepared for the spelling of words that are used to express his original thought, i. e., the words used in *composition*.

During the time the pupil is acquiring facility in copying and reproducing, attention should be given to developing his powers of observation and description by lessons on color, form, animals, etc., and by inducing him to talk freely on all subjects that come within the range of his observation.

SECOND YEAR GEOGRAPHY.

THE consideration of the article in the Journal for February, on "The Seven Little Sisters," suggested the thought of presenting some suggestions as to the manner of using the book in the second year grade.

Taking the story of Pen-se, the little Chinese sister, let us see what can be learned from it. On the second page of the story the child's home is described. It is a boat, a broad, square-shaped one without sails, but covered with a bamboo cover which can be moved back and forth. *Sears' Pictorial History of China* contains pictures of such a boat, which can be enlarged and drawn upon the board. In drawing the picture do not forget the little gate through which the ducks hurry out for their morning bath. The bamboo cover interests us. What is bamboo? Where does it grow? What color is it? Are any articles made of it brought to our own country? Is it heavy or light? Durable or not? Why make the cover of the boat of bamboo? Kang-hy, who sits at breakfast, has a hat made of it, so is the

pole upon which Sin hangs his buckets, boxes and baskets when carrying them. We will also find other things made of it, such as baskets, screens, tables, etc.

What do these people eat, seated at their low table? We see bowls of rice, such as we have at home. How came it in that far away place? Does it grow there?

Even little Pen-se takes her cup of tea for breakfast, and we are told that all take many cups each day. What is tea? A flower, a seed, a leaf? We will take a small bit from the canister in the pantry at home, steep it gently, then unroll the pieces and spread them upon paper and draw their outline. It is a leaf. How came the leaves to be rolled into such firm little cylinders? Who rolled them, and why? Where did the tea grow? What is the color of its flower? How planted and cared for? and how brought to this country? etc., etc. A genuine tea-box from the wholesale store will be of great interest at this time.

The porcelain and china cups are worthy our study, so are the odd-looking sticks used instead of knives and forks.

Breakfast being over in the boat Sin goes out to his morning work—fishing. What boy would not like to live in China and have birds catch fish for him? We wish now to know how large the cormorant is, its color, how it can catch a fish, whether with bill or claws; why it does not eat the fish instead of bringing them to Sin, etc.

Before leaving the story of Pen-se we must learn more of the little girl herself, what kind of a dress she wears, what kind of shoes, how she amuses herself, in what conveyance she rides when taking a journey, what trees she is accustomed to see, the appearance of the houses upon the street, the occupations she will see carried on upon the street, etc., etc., etc.

Through this little story the pupils should be led to associate with China the mulberry tree and silk, porcelain, bamboo, tea, rice, rice-paper, the cormorant, and the esculent swallow's-nest. The book furnishes but one picture. Pictures of every article, plant and animal, can be readily obtained from geographies, *Harper's Magazine and Weekly*, *Frank Leslie's Sunday Magazine*, *Commodore Perry's Expedition to China and Japan*, *Little People of Asia*, *Aunt Martha's Corner Cupboard*, and other books.

Children interested in the lessons will furnish the teacher with numerous articles of Chinese manufacture. The following list was seen on a table in a primary school: A pair of Chinese slippers, a tea-pot carved from stone, cups, saucers and plates of real china-ware, a Chinese tea-spoon, fans, lacquer boxes, bamboo baskets, Chinese money, lanterns, banners, carved ivory balls, Chinese candy, sandal-wood tapers, chop-sticks.

It is needless to say that the children were somewhat interested in their study of China.

F. S. BURT.

FIRST YEAR NUMBER—II.

THE NUMBER FOUR.

THE group four is formed by adding one to three, and the pupil is set to work to discover *fours*. He is much interested in observing that the room has four walls, the table four legs, a sheet of paper four edges; a slate, the table-top, a box-cover, four sides; a dog, a cat, a cow have each four feet and are called quadrupeds. Find other quadrupeds. A pile of thin blocks are upon the table; have all those selected which have four sides and give to the group the correct name, quadrangle. The term quartette can also be learned and applied. The relations in four are these:—

- 1 ball and 1 ball and 1 ball and 1 ball are 4 balls.
- 3 balls and 1 ball are 4 balls.
- 1 ball and 3 balls are 4 balls.
- 2 balls and 2 balls are 4 balls.
- 2 balls and 1 ball and 1 ball are 4 balls.
- 1 ball and 1 ball and 2 balls are 4 balls.
- 1 ball and 2 balls and 1 ball are 4 balls.
- 4 one balls are 4 balls.
- 2 two balls are 4 balls.
- 3 one balls and 1 ball are 4 balls.
- 1 three balls and 1 ball are 4 balls.
- In 4 balls there are 4 one balls.
- In 4 balls there are 2 two balls.
- In 4 balls there is 1 four balls.
- In 4 balls there is 1 three balls and 1 ball.
- 4 balls less 1 ball is 3 balls.
- 4 balls less 3 balls is 1 ball.
- 4 balls less 1 ball less 1 ball less 1 ball less 1 ball is no ball.
- 4 balls less 2 balls less 2 balls is no balls, etc., etc.

If allowed to experiment and discover these relations for themselves they will prove very interesting to the pupil.

In the spring and fall leaves and flowers may be used instead of the solids. Thus if the number four is the new number, each child may bring four leaves from a tree or plant in the yard. A flower or leaf lessom may be made a delight to both teacher and pupils. In the same manner shells, star-fishes, or other small land or sea animals may be used. A number of each specimen is not necessary as the class may stand on four sides of a table with the objects upon it.

For busy-work objects may be grouped and drawn thus: Four faces, four chairs, four cubes, four circles, four squares, four oblongs, four spiders, four butterflies, etc. The relations discovered may be represented by objects drawn; *figures are not necessary*. The relations in four may be represented in this way:—

Addition — o o o o

ooo o

o . ooo

oo oo

o o oo

oo o o

o oo o

Subtraction — ooo o ($4-1=3$)

oo oo ($4-2=2$)

Multiplication and div. — o o o o ($2 \times 2 = 4$ or $4 \div 2 = 2$)

ooo o ($1 \times 3 + 1 = 4$ or $4 \div 3 = 1 \text{ } [+1]$)

Flowers and plants having four leaves can be studied. Some of these are: The four-leaf clover, dog-wood flower, seringa blossom, mustard, wild forget-me-not, etc., etc.

In the study of the number four the pupil should learn that:

I. *Four quarters are one dollar*, and should have a variety of exercises which will make him familiar with the material, the size, the use of the quarter. The relations already known may be applied in this way:—

2 quarters and 2 quarters are 1 dollar.

3 quarters and 1 quarter are 1 dollar.

2 two quarters are 1 dollar.

In a dollar there are 2 two quarters.

In a dollar there are 4 one quarters, etc., etc., etc.

II. *Four gills are one pint*. Water, bran, or beans may be

used in measuring. The pupils should perform the work themselves, and learn to handle the apparatus carefully and to give *exact* measure. For busy-work have the relations applied which have already been learned, and represented upon the slates. It can be done in this way:—

$$\begin{array}{llllll} a. & \circ & \circ & \circ & \circ & \bigcirc & 1+1+1+1=4 \\ b. & \circ\circ & & & \circ\circ & \bigcirc & 2+2=4 \\ c. & \circ\circ\circ & & & \circ & \bigcirc & \text{etc., etc.} \end{array}$$

III. *Four quarts are one gallon.* This application of the number four may be treated in the same way as II. The pupils should be able to recognize and name the measures used, to state the relation of one to the other, and to state what articles are bought and sold by the gallon. From the same pitcher there may be poured cider, molasses, milk, vinegar, coal oil, gasoline, etc., etc.

IV. *Four quarters are one yard.* A number of yard measures should be provided and the pupils allowed to handle them freely; to measure the table, the walls, the doors, the room. During intermissions the fence, the posts, the pump, may be measured, care being taken that both horizontal and vertical lengths receive attention. Next let the pupils estimate the length upon the board, table or floor. Have two dots placed a yard apart, have two children hold their hands a yard apart, knots may be tied in a string, the hands held a yard from the floor—the estimate being made first and then tested by measurement.

The remaining applications which may be made are:—

- V. Four inches are one hand.
- VI. Four pecks are one bushel.
- VII. Four quarts are one gallon.
- VIII. Four weeks are one month.
- IX. A sheet folded into four leaves is a quarto.

D R A W I N G .

“ALL children, being natural imitators, try to draw. I would have my pupil cultivate this art, not exactly for the sake of the art itself, but *to render the eye true and the hand flexible*. In general, it matters little whether he understands this or that exercise, pro-

vided he acquires the mental insight, and the manual skill furnished by the exercise. I should take care, therefore, not to give him a drawing master, who would give him only copies to imitate, and would make him draw from drawings only. He shall have no teacher but nature, no models but real things. He shall have before his eyes the originals, and not the paper which represents them. He shall draw a house from a real house, a tree from a tree, a human figure from the man himself. In this way he will accustom himself *to observe bodies and their appearances*, and not mistake for accurate imitations those that are false and conventional. I should even object to his drawing anything from memory, until by frequent observations the exact forms of the objects had clearly imprinted themselves on his imagination, lest, substituting odd and fantastic shapes for real things, he might lose the knowledge of proportion and a taste for the beauties of nature.

I know very well that he will go on daubing for a long time without making anything worth noticing, and will be long in mastering elegance of outline, and in acquiring the deft stroke of a skilled draughtsman. He may never learn to discern picturesque effects, or draw with superior skill. On the other hand, he will have *a more correct eye, a truer hand*, a knowledge of the real relations of size and shape in animals, plants, and natural bodies, and practical experience of the illusions of perspective. This is precisely what I intend; not so much that he shall imitate objects as *that he shall know them*. I would rather have him show me an acanthus than a finished drawing of the foliation of a capital.

Yet I would not allow my pupil to have the enjoyment of this or any other exercise all to himself. By sharing it with him, I will make him enjoy it still more. He shall have no competitor but myself; but I will be that competitor continually, and without risk of jealousy between us. It will only interest him more deeply in his studies. Like him I will take up the pencil, and at first I will be as awkward as he. If I were an Apelles, even, I will make myself a mere dauber. I will begin by sketching a man just as a boy would sketch one on a wall with a dash for

each arm, and with fingers larger than the arms. Bye-and bye one or the other of us will discover this disproportion. We shall observe that a leg has thickness, and that this thickness is not the same everywhere; that the length of the arm is determined by its proportion to the body; and so on. As we go on I will do no more than keep even step with him, or will excel him by so little that he can always easily overtake and even surpass me. We will get colors and brushes; we will try to imitate not only the outline but the coloring, and all the other details of objects. We will color; we will paint; we will daub; but in all our daubing we shall be continually peering into nature, and all we do shall be done under the eye of that great teacher."—*Rousseau's Emile.*

HOW TO SECURE GOOD READING.—Some years ago, when I had the personal superintendence of large schools, a plan was adopted for teaching reading which proved very successful. When the teacher took the more advanced classes in the school for a reading lesson, he was not allowed to have any book in his hand. The children were told that they must, each of them, read the passage which came to their turn in such a manner as to be perfectly audible to the teacher, and with such inflection as to convey the sense of the passage. When any child failed to make the teacher hear, he had to read the passage again and again till he succeeded in making himself heard. In the same manner with respect to the meaning of the passage read, if a child failed in the first instance to convey the meaning, he was made to try once more; if he failed a second time, the teacher was told to call for a child who could give the meaning, and so the process went on till the meaning was correctly conveyed. This system was the means of exciting a great deal of emulation, and of bringing out the intelligence of the pupils. They were all eager to show how well they understood the passage before them. As a proof of the success of the system I am speaking of, our first class went to Exeter to take part in a reading competition, and carried off all the reading prizes. Their reading attracted considerable attention, and the judges were eager to know where the boys had been trained. I must add that for the success of the system the school must be kept quiet,—only one class being allowed at the same time to have a reading-lesson. —*Selected.*

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

IS IT FAIR?—Is it fair for a teacher to change his place of residence and neglect to order the address of his Journal changed* for a month or two, and then ask to have the missing numbers re-mailed to him? We are entirely willing to change the address as often as necessary, and will gladly re-mail Journals when they fail to reach their destination, through the fault of this office or the mails, and more than this ought not to be asked. Requests for change of address should reach this office not later than the 25th of the month; at that time we make up our mailing lists for the following month.

"REMEMBER."—Teachers who have not yet paid for the Journal should remember that it was distinctly understood that they were to pay *not later than January 1, 1887*. We have sent "reminders" to quite a number to let them know that that date has passed. Teachers with few exceptions are honest and intend to pay, but some are careless. Reader, if you are still delinquent, please forward the money at once, and receive credit and be forgiven. If there is any good reason why you can not pay now, and want further time, please write a card, that we may understand the matter. We will always be reasonable. If in sending out these "reminders" we make a mistake and send to you when you have paid, don't get *mad* and write us an ugly letter. Please remember that mistakes will happen, even with editors.

"THE NEW BRANCH"—the second article in this number of the Journal—deserves special attention. It is of importance that teachers read the books designated by the state board— but it is of more importance *how* they read them. This article and the one following will certainly give valuable suggestions to all interested.

"THE TIDES."—The first article in this issue of the Journal on The Tides is long, but it gives a new view and a complete discussion of a very important subject. The author of the article, now teacher in the Indianapolis high school, is a graduate of the State University, and has unusual mathematical ability. He certainly deserves much credit for studying out this new and more satisfactory explanation of "The Tides."

HARVEY M. LA FOLLETTE has assumed the duties of the office of Supt. of Public Instruction, and is hard at work. Judging from all the antecedents of Mr. La Follette he will make an industrious, courteous, efficient officer. His education is liberal and his experience has given him an intimate knowledge of the needs of the common schools, and he will most certainly keep the educational work of the state on the up grade. The Journal tenders him its cordial support in every good word and work.

JOHN W. HOLCOMBE's term of office as Supt. of Public Instruction expired March 15th, and he turned over the office to his successor, H. M. La Follette, on that day. Mr. Holcombe has filled the position for two terms, or four years, and it is generally conceded that he did it with credit to himself and the state. He is scholarly, industrious, well informed as to the school law, sound in his educational views, and always a gentleman. He has retired with the respect and confidence of the teachers of the state. The Journal having given him a hearty support during his entire term of service, wishes him abundant success in whatever field of labor he may hereafter engage.

THE LATE LEGISLATURE adjourned without enacting any law pertaining to education. Quite a number of bills were introduced on the subject, many of them excellent and a few of them bad, but as they all failed it is not necessary to take time to discuss them. It is rather remarkable that the worst one of the lot, that authorizing the State Board of Education to make a series of text-books, came the nearest to passing—it was engrossed in each house by large majorities.

The failure to appropriate money for the support of the educational institutions will cause some embarrassment—however each school will get the old appropriation, under an existing law, except Purdue, which will have to be provided for in some other way—but there is no doubt that the money will be secured.

PRIMARY GEOGRAPHY.

Especial attention is called to the articles for the last two months and this, in the Primary Department, on teaching geography. Prof. Sandison, of the State Normal School, has for some years past taken a stand directly opposed to the current idea in regard to the best method of teaching beginners in geography. These articles, by Mrs. Burt, are in the line of his method, and should be carefully studied. The plan implies some extra labor and some tact on the part of the teachers, and it also implies some reference books where the work is done to the best advantage. The reasonableness of the plan strongly commends it, and it must prove an improvement on any former method, in the hands of a skillful teacher with reasonable facilities.

DISPENSING WITH EXAMINATIONS.

The plan adopted in some colleges and high schools, of dispensing with the examination of such students as have reached an average of 85 or 90% in recitations seems to have merit. It stimulates to continuous and careful preparation, rather than spasmodic effort to "cram" just before examination; it offers a premium of a day's vacation to diligent students; it dispenses with that undue excitement and prostration that examinations sometimes bring upon very nervous persons; and last but not least, it relieves teachers of a vast deal of labor at the close of a term when duties always multiply.

When a student has sustained a high standing in his recitation and written reviews, there certainly can be no risk in passing him without a final examination. The plan is commended by those who have tried it, and is worthy of a trial at least.

THE READING CIRCLE.

✓ The Reading Circle is certainly doing an excellent work, and the board of managers deserve much credit for their wise planning and their unselfish labor. The result must be a gradual uplifting of literary attainment of teachers. There are now more than three thousand teachers in the state taking all or a part of the course, and yet only about one thousand have formally joined the circle and paid their fee. This seems hardly right: 1st, it makes a bad showing for the circle, and 2d, it makes a bad showing for the teachers who are willing to receive the benefits of the circle and are not willing to share in its necessary expenses. All should join, and furthermore all who have read should pass the June examination so far as the reading has been done. This would show pluck, and a determination to make the reading amount to something.

THE CINCINNATI SCHOOLS.

The Cincinnati School Board has for years been unique in its organization. The schools have been managed largely through "local trustees." These local trustees were elected for each school district, and had in their hands the power to appoint all teachers in their respective districts, and also to supervise the schools. This local committee could put in any teacher or put out any teacher without consulting the Supt. of schools, the principal of the district, or the general board of education. It also outranked the principal in the details of management, and the principal was responsible to this committee rather than to the superintendent or the general board.

Any school man will see at a glance that such a plan must prove

utterly destructive to any adequate *system* of supervision. Under such an arrangement it was impossible that the superintendent should be much more than a "figure-head."

When the Hon. E. E. White took charge of these schools last fall and began to study their working, these defects were impressed upon him, and he has recently made a report to the board calling attention to needed changes. It is not necessary to say that the report caused a sensation, neither is it necessary to say that the strength of his position could not be gainsaid, and that the board is to be reorganized in accordance with his suggestions.

And furthermore the legislature has taken up the matter and passed a law taking from school boards the power to appoint teachers and giving it to the superintendent, subject only to the approval of the board. According to this law the school board can reject a teacher nominated by the superintendent, but can not put in a teacher that the superintendent does not first name. This is as it should be; if the superintendent is held responsible for the efficiency of the school, he should have the right to select his own teachers. This has been the custom in Indianapolis for many years, and should be the custom every place. Any school board that wishes to do the best thing possible by the schools, will at once concede that a competent superintendent is better qualified to select and assign teachers than any school board, as such, can possibly be. There is only one possible objection to allowing superintendents the privilege of nominating their own teachers, and that is, it is hard on those members of school boards who are there chiefly that they may provide places for their daughters, their sisters, "their cousins and their aunts."

If we were so disposed we could name several towns and cities in Indiana that need reforming in this respect just about as much as did Cincinnati.

INDIANAPOLIS PUBLIC SCHOOLS.

The schools here, under the supervision of L. H. Jones, are moving on smoothly and doing good work, but they are very much embarrassed for want of money. Under a law passed some ten or twelve years ago, when the valuation of property was inflated (on the tax-duplicate) and the results of "the panic" were being felt most severely, the School Board was limited to a tax of 20 cents on the \$100, for all purposes—building, tuition, supplies, and all. Since that time the taxable value of the city property has been reduced \$10,000,000, and the number of children in the schools has increased 40%. The result is that the board is in debt to the extent of its legal ability, and the income is not sufficient to run the schools and provide the needed new buildings. The late legislature would have given the needed relief had it not been for the "dead-lock."

In addition to the above trouble Senator Winter, of Marion county, in constructing a law two years ago, by which the duties of the city treasurer should devolve upon the county treasurer, committed the great blunder of leaving about \$60,000 of the School Board's money continuously in the hands of the county treasurer: and now in order to get this they have to pay the county treasurer interest on it. Senator Winter is almost criminally at fault in not correcting this blunder early in the late session of the legislature, as he was urged to do, instead of postponing any effort till it was too late.

What the board will do is not certain. What it ought to do is to hold the schools, if possible, in their present condition till they get relief. They should not try to pay any old debts, and they should not attempt to build so long as it is possible to avoid it. To cut off the high school, or cut down materially the wages of teachers, or make any other radical change, is not demanded by the people and would be a fatal mistake. The citizens of Indianapolis want good schools and are willing to pay for them. The present embarrassing law was not originated by the people, but by a few wealthy tax-payers. There is no doubt but that the schools can be held for the next two years substantially as they are if the board will work to that end, and this too without increasing the debt, and this is what the people want.

THE NORMAL SCHOOL REPORTS.—The biennial reports of the Indiana State Normal School have been made to the Governor. Murray Briggs, of Sullivan, president of the board, in his report says that the growth of the institution since its organization, seventeen years ago, has been steady and prosperous, the enrollment during the past year numbering 909; 286 persons have graduated from the school, and there have been 4,242 undergraduates. The increase in pupils has made necessary an increase in the force of teachers; and the annual appropriation of \$10,000 to pay these is not sufficient. The report of Joseph Gilbert, the secretary, shows that the total receipts of the institution for the year 1885 were \$33,378.17, of which \$20,000 were from the school fund distribution, \$7,000 from the deficiency appropriation, and there was a balance of \$5,886.16. For 1886 the total receipts were \$37,643.16, and the present balance is \$7,971.52. The reports of all the officials and visiting committees are also made, giving a detailed account of the operations of the institution for the past two years.

FRANKLIN COUNTY.—This county, according to authentic reports, was never in so good working condition as at present. The new manual is the fullest ever issued in that county, and exhibits fairly the condition of the school work in the county. The Reading Circle is having a good patronage. Many literary essays have been presented at the township meetings, usually upon the books named by the State Board. A. N. Crecraft is an excellent superintendent.

GEMS OF THOUGHT.

A sorrow shared is halved; a joy divided is doubled.—*G. W. Hoss.*

'Tis education forms the common mind,
Just as the twig is bent the tree's inclined. *Pope.*

The teacher helps his pupils most who most helps them to help themselves.—*Hoss.*

Hope springs eternal in the human breast,
Man never is, but always to be blest. *Pope.*

Knowledge is power.—*Bacon.*

There is nothing great in earth but man,
And nothing great in man but mind. *Sir W. Hamilton.*

I count this thing to be grandly true:
That a noble deed is a step toward God—
Lifting the soul from the common sod
To a purer air and a grander view. *J. G. Holland.*

Except a living man there is nothing more wonderful than a book!—a message to us from the dead—from human souls whom we never saw, perhaps, thousands of miles away; and yet these on those little sheets of paper, speak to us, amuse us, terrify us, teach us, comfort us, open their hearts to us as brothers.—*Charles Kingsley.*

The Sabbath is the golden clasp which binds together the volume of the week.

'Tis not in mortals to command success,
But we'll do more, Sempronious; we'll deserve it. *Addison.*

Do what conscience says is right;
Do what reason says is best;
Do with all your mind and might;
Do your duty and be blest.

THE RIGHT ROAD.

"I have lost the road to happiness—
Does any one know it, pray?
I was dwelling there when the morn was fair,
But somehow I wandered away.

I saw rare treasures in scenes of pleasures,
And ran to pursue them, when lo!
I had lost the path to happiness
And I knew not whither to go.

I have lost the way to happiness—
Oh, who will lead me back?"

Turn off from the highway of selfishness
To the right—up duty's track!

Keep straight along and you can't go wrong,
For as sure as you live, I say,
The fair, lost fields of happiness
Can only be found that way.

Ella Wheeler Wilcox.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR FEB.

[These questions are based on the Reading (ircle work of last season.)]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to legibility (50), regularity of form (30), and neatness (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

GRAMMAR.—1. What uses may the substantive clause have in a sentence?

2. When should the adjective clause be set off by the comma?
3. When is *to*, the sign of the infinite, omitted?
4. What are the principal parts of a verb?
5. State how each of the grammatical properties of the compound personal pronoun is determined.
6. Use *that* to introduce a substantive clause; to introduce an adjective clause, and to modify a noun.
7. What is the difference between an objective and an adverbial modifier?
8. Write five sentences containing respectively a proper, a class, a collective, an abstract, and a mass noun.
9. Write sentences containing nouns in the nominative, the objective, and the possessive case, by apposition.
10. State the difference between a transitive and an intransitive verb.

GEOGRAPHY.—1. Describe the physical characteristics of Holland.

2. In what states in the Union is coal found in large quantities?
3. What are the chief industries of the Florida Keys?
4. Locate Honolulu, Quebec, Tokio, Kansas City, Little Rock.
5. Bound Illinois; name its capital and its chief city.
6. What are the chief commercial products of the Northern Peninsula of Michigan?
7. Describe Cape Cod and its Industries.
8. What is the difference in time between London and Washington (Longitude of Washington 77° W.)?
9. Describe the standard time now used by the railroad companies
10. Where is Zululand?

PHYSIOLOGY.—Discuss the subject of animal heat following this outline:

1. Origin of animal heat.

2. Normal and abnormal temperature of the body, and the relation of each of them to health and disease.
3. Natural means for reducing the temperature of the body.
4. Uses of clothing in relation to animal heat.
5. Relation of foods to the production of animal heat.
6. Relation of respiration to the production of animal heat.

READING.—1. What are inflections? What are the different kinds? Give examples of each.

2. Name three common faults in teaching reading.
3. What is the relative importance of the reading lesson as compared with the arithmetic lesson, (1) in a primary class, (2) in an intermediate class, (3) in an advanced class?
4. Would you attempt to exercise any influence over the home reading of the pupils? If so, in what way?
5. (a) What use can be made of the newspaper in reading exercises? State your opinion of the advantages and disadvantages arising from its use. (b) What process do you pursue in teaching pupils to use the dictionary?

SCIENCE OF EDUCATION.—1. What is the aim of silent reading? Of oral reading? Which should receive the greater attention in the school, and why?

2. What is the value of oral spelling? Of written? Which should receive the greater attention in the school, and why?
3. If a person had only the senses of sight and feeling what direct knowledge could he have of material objects?
4. What periods of United States history do you consider the most important, and why?
5. In teaching geography what would be the value of leading the children to study the natural object as far as possible?
6. Describe the Socratic method of instruction. What are its merits?
7. What were the characteristics of the Roman education?

ARITHMETIC.—1. A sold the northwest quarter of the northwest quarter of the southwest quarter of a section of land for \$100; at that rate what was the whole section worth? 5, 5.

2. Divide $\frac{3}{4}$ by $\frac{1}{8}$ by analysis, and from your work deduce a rule for a short process. 3, 3, 4.

3. A square park contains 1600 sq. ft.; if a walk 4 ft. wide be made around it on the outer edge of the park, what will it cost at 7 cents a square foot? 5, 5.

4. A merchant imported 50 bales of cloth, each containing 10 pieces of 25 yds., at \$3 per yd.; 5% was allowed for tare, and the duties paid in gold at 30% ad. val.; with gold at \$1.25, what would the duties have been in currency? 5, 5.

5. A note for \$1500, not payable in bank, due in 6 months, with interest at 6%, was, at the end of 3 months, discounted in bank at the rate of 10%; what were the proceeds? 5, 5.

6. If 100 men can dig a ditch 1200 rods long, 4 feet deep, 5 feet wide at top, and 3 feet wide at bottom, in 30 days of 10 hours each, how many rods can 75 men and 100 boys (5 boys being equal to 3 men) dig in 50 days of 8 hours each, the ditch being 5 feet deep, 8 feet wide at top, and 5 feet wide at bottom? 5, 5.

7. An estate was so divided between 4 heirs that A received $\frac{1}{2}$, B $\frac{1}{4}$, and C $\frac{1}{4}$; what % of the estate did D receive? 5, 5.

8. The section of a perfectly round tree is 10 feet long, 5 feet in diameter at one end, and 4 feet at the other; what are the solid contents in cubic feet? 5, 5.

9. What must I pay for a 6% stock to make a $7\frac{1}{2}$ % income? 5, 5.

10. A gothic building is 24 feet wide, and the ridge 9 feet above the joists; what must be the length of a rafter to allow it to project 3 feet beyond the wall? 5, 5.

U. S. HISTORY.—1. Give an account of the discovery of America by the Cabots.

2. Mention the principal events of Jackson's administration.

3. Give a brief biography of John Quincy Adams.

4. When and how was slavery finally abolished?

5. When was the Northwest Territory organized? What important ordinance was passed in regard to it, and by what body.

ANSWERS TO PRECEDING QUESTIONS.

SCIENCE OF EDUCATION.—1. To get the thought. To express the thought. Silent reading; because one must have the ability to get thought before he can express it, and because all that we learn from books and other printed matter usually comes by silent reading.

2. Helps in pronunciation. Fixes the form of the word in the mind. Written; because we must usually use spelling when we write.

3. Form, color, roughness or smoothness, warmth.

4. Revolutionary and constitutional; because during these periods the principles of our government were founded and exemplified.

5. They would have a much clearer idea of the object.

6. It consisted of the questioning of the pupil until he saw the falsity or truth of a proposition. It leads the pupil to do his own thinking and finally to do his own questioning.

7. The education of Rome was utilitarian in character. For full account, read History of Education by Painter, pages 65-70, and by Compayre, pages 43-60.

ARITHMETIC.—1. $\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$ section = $\frac{1}{64}$ section. $\frac{1}{64}$ section cost \$100, $\frac{3}{4}$ of a section, costs $64 \times \$100 = \6400 . Ans.

2. $1 \div \frac{1}{5} = 5$; $1 \div \frac{1}{6} = \frac{1}{4}$ of 5, or $\frac{5}{4}$; $\frac{1}{4} \div \frac{1}{6} = \frac{1}{4}$ of $\frac{5}{4}$, or $\frac{5}{16}$; $\frac{3}{4} \div \frac{1}{6} = 3 \times \frac{5}{16}$, or $\frac{15}{16}$. Invert divisor and proceed as in multiplication of fractions.

3. $\sqrt{1600}$ sq. ft. = 40 ft., length of one side. 40 ft. + 8 ft. for corners = 48 ft. 2 sides contain 2×48 ft. = 96 ft. 2 sides of 40 ft. = 80 ft.; 80 ft. + 96 = 176 ft., length. 176×4 sq. ft. = 704 sq. ft. 704 sq. ft. at 7¢ = \$49.28, cost.

4. $(50 \times 10 \times 25 \times \$3) - 5\%$ tare = \$35625. Gold is 25% premium. 30% ad val. in gold is = 37½% in currency. 37½% of \$35625 = \$13359½ duty in currency.

5. The amount of \$1500, at 6% for 6 mo. = \$1545. The bank discount of \$1545, at 10% for 93 days = \$39.91¼, \$1549 — \$39.91¼ = \$1509.08¾, net proceeds.

6. 100 men : 135 men

5 ft. deep : 4 ft. deep

30 da. : 50 days : : 1200 rd. : 1063⅓ rd. Ans.

10 hr. : 8 hr.

6.5 ft. average width : 4 ft. av. width.

7. $\frac{1}{2} = 33\frac{1}{3}\%$, A's; $\frac{1}{4} = 25\%$, B's; $\frac{1}{5} = 20\%$, C's. $33\frac{1}{3}\% + 25\% + 20\% = 78\frac{1}{3}\%$. 100%, estate — $78\frac{1}{3}\%$, A's, B's and C's = $21\frac{2}{3}\%$, D's. Ans.

8. $(5^2 \times .7854) + (4^2 \times .7854) = 32.2014$ sq. ft., area of bases.

$\sqrt{(12.5664 \times 19.635)} = 15.708$. $15.708 + 32.2014 = 47.9094$ cu. ft. 47.9094 cu. ft. $\times \frac{1}{3} = 159.698$ cu. ft., capacity. Ans.

9. $\$.06 + \$.075 = \$.80$, cost of one share.

10. $\sqrt{\frac{1}{2}(24)^2 + 9^2} = 15$ ft. 15 ft. + 3 ft. = 18 ft., length of rafter.

U. S. HISTORY.—1. John Cabot and his son Sebastian, Venetians living at Bristol, England, sailed in their own ship, and discovered Cape Breton Island in 1497. Afterwards Sebastian explored the coast of the Atlantic Ocean as far south as Albemarle Sound, claiming the country for England. But little advantage accrued to England for many years from these discoveries beyond the advantage of the fisheries, which attracted considerable and growing attention.

2. In political affairs—The general removal of all public officers not politically in accord with the administration—thus the spoils system was not originated by Jackson, as has been supposed, but by Jefferson, and was urged upon Jackson by the Albany Regency. He vetoed the new charter of the Bank of the United States, encouraged the formation of State Banks, and removed Wm. J. Doane as Secretary of the Treasury for refusing to remove the public funds to the State Banks. The controversies on the tariff resulted in South Carolina in the passage of the Nullification Acts and the strong assertion of State Rights.

Jackson, although he disliked the tariff, determined to enforce it as the law, and to resist nullification, which eventually gave way under a compromise of the tariff, but at the expense of driving Calhoun and his supporters from the Democratic party. In foreign affairs his strong attitude towards France, and his refusal to apologize for recommending the seizure of French vessels, resulted in that country paying the American claims after a delay of thirty years. In home affairs, the introduction and building of the locomotive, and the rapid increase of the railway system; the introduction of the use of anthracite coal; the replacing side-wheels in steam vessels with the screw propeller; the invention of the reaper, and Colt's revolver. And the rise of the Abolition party, at first insignificant and apparently unimportant, has in fact proved the most important event of that administration.

3. John Quincy Adams, son of John Adams, the second President of the United States, was born in Massachusetts in 1767, and spent his whole life almost as a public man. He was minister to Brussels and Prussia for seven years, and U. S. Senator for five years. Leaving the Federalists and becoming a Democrat, he was sent to Russia as minister for eight years. Returning he became Secretary of State under Monroe, and was in the celebrated "scrub-race" for the presidency in 1824, and elected President by the House of Representatives over Jackson and Crawford, the electoral college having failed to elect. Defeated in 1828 by Jackson, he was sent to the lower house of Congress in 1831, where he remained until his death in 1848, which occurred in the capitol. Known as the "Old Man Eloquent" he exercised a personal influence on the floor of Congress greatly in advance of his political strength.

4. In 1860 President Lincoln issued a proclamation warning the seceding states that unless they returned to the Union by the first day of January, 1863, he would declare their slaves free. The states not returning, the final Emancipation Proclamation was issued on January 1, 1863, declaring the slaves in the seceding states free, a proclamation which the events of the war made effective throughout the Union.

5. The Northwest Territory was ceded to the general government by Virginia in 1784, but was not fully organized until 1787, by the celebrated Ordinance of 1787, which was passed by the Confederate Congress in July of that year. By this ordinance slavery was forever prohibited in the territory or in any states erected out of it, equal civil, political and religious rights were guaranteed to all the inhabitants, as also a trial by jury. It was made obligatory to create and support, and encourage common schools to the highest possible point. All states erected from the territory, not to be more than five in number, were to be self-governing, and equal in all respects to the original thirteen.

READING.—1. Inflections are upward or downward slides of the voice in the utterance of a sentence, or a combination of the upward

and downward slide in the same term. *Ex.* Will you go Wednesday? What is truth? Can a cur lend three thousand ducats?

2. (a) Teaching by the punctuation-points; (b) teaching by imitation; (c) teaching by *quantity* rather than by *quality*.

3. In the primary grade the reading lesson is more important than the arithmetic lesson, since reading is the introduction to and the means of comprehension of all the other branches; in the intermediate grades, the importance of the two is about equal; in the higher grades the reading again becomes more important, *if properly taught*.

4. Certainly. By creating a taste for the better forms of literature and by suggesting works *both* interesting *and* profitable, after ascertaining the taste and the "bent" of the individuals of the home.

5. The "newspaper" should be used with great caution in reading exercises. Much may and should be gained from it in the way of the world's doings and of important discoveries, inventions, etc., but a fondness for the daily paper tends to superficiality, feverishness and gossip. The dictionary may be taught in connection with the spelling lesson, the reading lesson, etc., as well as by special exercises designed to test the pupil's knowledge of and ability to make delicate distinctions in the use of words.

PHYSIOLOGY.—1. Heat in the body is due to hot food and drink, to chemical changes in the various tissues in motion or at rest, to friction from the movement of the muscles, etc.

2. The normal temperature of the body is 98° Fahrenheit. Any sudden lowering or increase of this in any portion of the body is an indication of disease, as well as any gradual and continued diminution or increase in the body as a whole.

3. When the temperature is high, as 102° and upwards, it is often desirable or necessary to reduce it promptly. This may be done by sponging the body off with hot water, or with hot water with a small amount of alcohol in it; or by wringing a blanket out in hot water and wrapping the body in it for a few minutes, or by putting the body into a tub or basin of hot water for a few seconds, and immediately after each use of water, wiping the body dry and keeping it warm.

4. Man, in the temperate and frigid zones, since he lacks fur and down, needs clothing to maintain the temperature of the body at the normal point. Certain clothing, as linen or cotton goods, is a better conductor than other clothing, as woollen goods. Such clothing and such changes of clothing should be used as will prevent sudden chills or too great heat.

5. Oxygen is taken in through the lungs; oxidizable foods are received into the alimentary canal; these meet in the tissues, oxidation results and heat is liberated. Warm food also adds to the bodily temperature.

6. A considerable portion of the oxygen of an inhalation passes through the walls of the air-cells and pulmonary veins into the blood.

GRAMMAR.—1. A substantive clause may be used (1) as subject of a verb; (2) as object of a verb; (3) as a predicate noun; (4) as object of a preposition.

2. The adjective clause should be set off by the comma when it is not restrictive in its use.

3. After the common auxiliary verbs; also, after bid, let, dare, need, see, hear, feel, help, please, and some other verbs.

4. The principal parts of a verb are, the *present indicative*, the *past indicative*, and the *past participle*.

5. The person and number of compound personal pronouns are indicated by their form, as also is the gender of the pronouns of the third person, singular. The pronouns of the first and second persons do not mark distinctions of gender; and the plurals are indeterminate in gender, that being indicated by the context. The case is determined by the use of the word, either as subjective or objective in relation.

6. (a) That Cæsar was a remarkable man is the general opinion. (b) He that hath wife and children hath given hostages to fortune. (c) We cherish the hope that he will return.

7. In general, all modifiers of verbs are adverbial modifiers, and may denote time, cause, manner, degree, purpose, result, etc.; but when the object complement is one word, it does not express any of these relations.

8. (a) Parnell is an Irish patriot. (b) The river is very wide. (c) The fleet was victorious. (d) Industry is the parent of success. (e) Iron is a useful metal.

9. (a) Milton the *poet* wrote "Paradise Lost." (b) "Paradise Lost" was Milton the *poet's* production. (c) "Paradise Lost" was composed by Milton the *poet*.

10. A transitive verb is one that denotes an action terminating on some object. An intransitive verb is one that denotes (1) a state or condition; (2) an action not terminating on an object.

GEOGRAPHY.—1. Most of the surface of Holland is below the level of the sea, from which it is protected by dikes. It is flat, and intersected by river currents. The soil is fertile.

2. Pennsylvania, West Virginia, Ohio, Indiana, Illinois, Maryland, Missouri, Colorado.

3. The manufacture of cigars, and foreign commerce are the chief industries of the Florida Keys. The exports are sponges, green turtles and cigars.

Honolulu, the capital of the Sandwich Islands, is on the island of Oahu. Quebec is in the southern part of the province of Quebec, on the river St. Lawrence. Tokio, the capital of the Japanese Empire, is in the eastern part of the island of Hondo. Kansas City is in the western part of Missouri, on the Missouri River. Little Rock is in the central part of Arkansas, on the Arkansas River.

5. Illinois is bounded on the north by Wisconsin; on the east by Lake Michigan and Indiana; south, by Kentucky; west, Missouri and Iowa. Springfield is its capital, and Chicago its chief city.

6. Copper, iron, and lumber.

7. Cape Cod is a sandy peninsula which forms the southeastern portion of Massachusetts, extending eastward about thirty-five miles, then making a bend and extending northward about thirty miles further. Its numerous bays furnish excellent harbors, from which sail the vessels of its many seamen who are engaged in various fisheries, chiefly cod or whale.

8. 5 hours and 8 minutes.

9. The scheme of standard time adopted in the United States for regulating railroad time-tables provides that the country be divided into four sections: an eastern section (the 75th meridian); a central section (the 90th meridian); a Rocky Mountain section (the 105th meridian); a Pacific section (120th meridian). Throughout each of these sections the same time is used, they being one hour apart, there being no difference in minutes and seconds. All changes from one hour standard to another are made at the termini of the railroads or at the ends of divisions.

10. Zululand is in the southeastern part of Africa bordering on the Indian Ocean.

READING CIRCLE DEPARTMENT.

OUTLINES FOR APRIL.

HAILMAN'S LECTURES ON EDUCATION—LECTURE VIII.

The subject of Lecture VIII is the influence of philosophic thought on modern education. Every system of thought and nearly every great philosophic thinker, from Plato down, has applied the principles of the system or of thought to the problem of education. This fact grows out of the further fact that all philosophy, so far as it deals with man, must take into account his three-fold nature: physical, intellectual, and moral. Philosophy always attempts to make education complete and harmonious. Generally speaking, it rates the various kinds of education at their true value. We owe it to Rosenkranz, the author of the *Philosophy of Education*, that the difference between school-education and the various forms of other education was first distinctly stated. This distinction is of great value. In order to effect any kind of work well, we must distinguish it from other like things that are possible.

Kant, Fichte, Schilling, and Hegel are successors to one another in the order named. They are the founders and authors of one of the

two bold and distinct modern systems of philosophy. Rosenkranz was a pupil of Hegel and the chief disciple of his school of thought and filled, for many years, the chair of philosophy at Koenigsberg, filled by the immortal Kant. These men represent the spiritualistic or mind philosophy as against the sensualistic or materialistic philosophy of Locke, Comte, Hume, and Herbert Spencer. They believe that the soul is a spark struck from the great personal First-Principle of the Universe, and that the mind of man is kindred with the mind of God. One can see, at a glance, the value they will set on the might and worth of education.

The five men who have been named as belonging to one school—Kant, Fichte, Schilling, Hegel, and Rosenkranz—take substantially the same view of education. They believe that it is a powerful instrumentality for developing the body and mind of man. By it he is fitted for his destiny in the world, and made a good member of the various social institutions. No other school of thinkers has given higher worth to the teacher and his work.

These men divide education into physical, intellectual and moral, according to the elements that enter into it, which are Life, Cognition, and Will. Physical education has for its aim right living, that is, the proper action and reaction of the body on the mind. Intellectual education, to use the words of Rosenkranz, is to give each person the tools of thought, i. e., the elementary branches, a picture of the world, and a working knowledge of his surroundings. Moral education is to make him ethical or obedient to duty toward his fellow-men.

The writer of these lines is not well enough acquainted with Herbert and Beneke to write intelligently from his own knowledge, and so will not attempt any criticism of their ideas.

Herbert Spencer is the great apostle of utilitarian education. He believes all training should be shaped to the practical ends of life, meaning thereby the more immediate needs of our existence. Science, according to his view, is the best instrumentality for the culture needed by our modern life.

S. S. PARR.

HISTORY.

Green's Shorter History of the English People.

REVIEW: "The tree of Faith its bare, dry boughs must shed,
That nearer heaven the *living ones* may climb;
The false must fail, though from our shores of time
The old lament be heard,—"Great Pan is dead!"
That wail is Error's, from his high place hurled;
This sharp recoil is Evil underfoot."

The death of Elizabeth marks a mile-stone in the development of English history. "The age of the Renaissance and of the New Monarchy passed away with the Queen." England, that fifty years before had only been saved by the jealousies of foreign powers, now stood in

the front of empire. The great political and ecclesiastical forces of the nation had been so held in check by the inimitable skill of Elizabeth and her Cabinet that in spite of differences of opinion in regard to church and state, England had become a *consolidated* nation with *broad sympathies within herself*, and possessed of great respect for her national honor. Prosperity at home and comparative peace with foreign powers had produced that *leisure* which develops *thought*, and hence, great intellectual and social growth were among the necessary elements of this new era in civilization. The Elizabethan Age in literature was a *necessary* result which must occur every time *great genius* in any age comes in contact with *great conditions*. It was no more a marvel that we had a Shakespearean Age *then*, than that we have an Emersonian Age *now*; no more a marvel that the Theology of the times produced a Robinson, a Brewster, or a Browne, than that the Theology of our own times has produced a Collyer, a Spurgeon, or a Beecher. Each and all are the legitimate outburst of souls that had been "crying in the dark" and that had too long been answered with "no language but a cry."

"No gain is lost; the clear-eyed saints look down
Untroubled on the wreck of schemes and creeds;
Love yet remains, its rosary of good deeds
Counting in task-field and o'er peopled town;
Truth has charmed life; the Inward Word survives,
And day by day its revelation brings;
Faith, Hope, Charity, whatsoever things
Which can not be shaken, stand. Still holy lives
Reveal the Christ of whom the letter told,
And the new gospel reveals the old."

In the Castle of Edinburgh, on June 19th, 1566, a son was born to Lord Darnley and Mary Queen of Scots. This son in 1567, Scotland being ruled during his childhood by her nobles, became James VI of Scotland, and at the death of Elizabeth, James I of England, thus uniting for the first time the kingdoms of England and Scotland, and under the title of "Great Britain."

Mary and Lord Darnley were both grand-children of Margaret Tudor, who was a sister of Henry VIII of England. James was educated by George Buchanan; history and tradition agree that he "spanked the king" in order to discipline him, but doubtless many lived to see the day that they regretted that the "spanking" had not been more effective. But Buchanan did another thing that was effective: he wrote a pamphlet in which he asked the question, "What is the source of power?" His answer was, "*The will of the people is the only legitimate source of power. It originates from a natural, instinctive perception of the principle that men, to have government must have a governor; and the same principle gives them the right to say who shall*

govern them. The people have a right to choose their rulers, and if they prove to be bad, they have a right to depose them."

This sounds like the declarations of a later day from those—

"Whose state-craft is the Golden Rule,
Whose right of vote a sacred trust;
Clear, over threat or ridicule,
All hear the challenge: '*Is it just?*'"

But Buchanan's doctrine at the time he promulgated it was new to the world, but it did not take long for the new idea to spread; the human mind was now on the alert, and it did not take England and Scotland long to catch new views with reference to their rulers. The Tudor idea of *absoluteism* did not attempt the monopoly of English Law, but rather freedom from the see of Rome; whatever innovations might have been made beyond the kingly prerogative, the Tudors still held themselves bound by the jurisdiction of English courts; but James seized upon the idea involved in the word *absolute* and tortured it into meaning for him the independence and superiority of all law or precedent, and thus claimed that a king held his prerogative by "divine right." Macaulay says that "James was made up of two men—a witty well-bred scholar, who wrote, disputed, and harangued; and a nervous, drivelling idiot, who acted." "The wisest fool in Europe, he disappointed both his friends and his enemies; his religion like his politics pleased no one. Catholics expected clemency from the influence of the early training of his mother; the Puritans hoped for leniency from the Presbyterian bent that he had necessarily developed in Scotland; but the "divine right" in James might have been defined as "consummate selfishness." To carry out his purposes he did not hesitate to sacrifice men of any opinion. His reign was one long struggle with Parliament, the Parliament contending for more liberty, James for more power. Determined to ignore the Parliament which continually insisted that "a redress of grievances must precede the granting of supplies," he tried to raise a revenue by reviving many of the feudal customs; he "extorted benevolences, sold titles of nobility, and increased monopolies," until he ruined the enterprise and trade of the country by wresting it from the masses and putting it in the hands of the few. But Parliament finally asserted its prerogative, *revoked* his decrees and condemned his *foreign policy*.

At the close of James' reign England had ceased to be the leading Protestant power of Europe.

Charles I was even more tyrannical than his father had been; the struggle between King and Parliament continued. The "Petition of Rights," the second great charter of liberty, was granted in 1628. This Petition "forbade the King to levy taxes without the consent of Parliament, to imprison a subject without trial, or to billet soldiers in private houses." Charles dismissed the Parliament, gave no attention

to his promises to it, and for eleven years "ruled like an autocrat." Charles' will was as imperious in Scotland as in England, and finally a Scotch army crossed the border and forced Charles to call a new Parliament in 1640, which from its great continuance was called the "Long Parliament." The contest between Parliament and the King now became so hot that war was inevitable. The civil war which now ensued brought to the front some of the grandest characters in history, and resulted in determining forever the fact, that the *rights of the people are paramount*, that freedom of *conscience* is inalienable, that *tyrants* may be deposed, that manhood is more than kingship, and that government is for the *governed*.

Advanced Work—Pages 543 to 613.

TOPICS.—(a) Write a paper of 40 lines explaining the relation of Calvinism to Puritanism. (b) Write a paper of 30 lines explaining the *causes and conditions of thought* which led to the founding of the "Royal Society" of science. (c) Study carefully the relation of Paradise Lost to Puritanism, as explained in the text. (d) Note why Pilgrim's Progress was a *necessary* outgrowth of the times. (e) Note how it was that Shakespeare's plays *developed* as well as *reflected* Puritanism. (f) Study well the characters of Cromwell, Pym, Hampden, Laud, Prince Rupert, and Buckingham. (g) Note the relation of each to the country and to the king.

NOTE.—The year's work in history will close on page 706, so that those who have time for further work may spend it on review.

MATTIE CURL DENNIS.

MENTAL SCIENCE—WATTS ON THE MIND.

SUBJECT: "Forming Judgments"; and "Methods of Teaching."—pp. 145-175

1. ITEMS OF PROFESSIONAL IMPORTANCE.—1. The idea of utility in choosing one's studies, IV, 146. 2. Clearness in seeing and stating questions, VII, 147. 3. The error of following merely local truths, XI, 148. 4. The danger of a false bias, XIV, 151.

"In forming a judgment, lay your hearts void of foretaken opinions: else whatever is done or said will be measured by a wrong rule; like them who have the jaundice, to whom everything appeareth yellow."—*Sir P. Sidney*.

5. Thorough learning as a preparation for teaching, I, 167; II, 168. 6. The Socratic method, IV, 168. 7. Use of references and illustrations, 171. 8. Adaptation of teacher to pupils, IX, 172. 9. Function of child curiosity, x, 173.

"One great reason why many children abandon themselves to silly sports, and trifle away their time insidiously, is because they have found their curiosity balked."—*Locke*.

10. The study of current events, XIII, 174.

II. SUMMARIES.—1. The marks of a partial examination, XII, 149. 2. Rules for judging of probabilities, XXVI, 161. 3. The method of looking for causes, I, 163. 4. The method of looking for effects; II, 165. 5. Advantages of the Socratic method, IV, 168. 6. The method of explaining a text, VI, 170.

III. QUOTATIONS TO BE MEMORIZED:—1. "Stating a question with clearness and justice goes a great way toward answering it."

2. "If you would be led honestly into the truth, keep a just indifference to either side of the question."

3. (Paragraph XI, 148.)

4. "Zeal must not reign over the powers of our understanding but obey them."

5. "The bigots of all parties are generally the most positive."

6. "Truth does not generally go by the lump."

7. "So I believe; so I will believe," is a prison of the soul, and a bar against all improvements of the mind. R. G. BOONE.

READING CIRCLE NOTES.

"Do you appreciate the wonderful advance, in interest in education, over the entire land? It is without a parallel in any profession at any period of American history."—*N. E. Journal*.

Members of the Reading Circle will be profited by knowing two little books from Mrs. Louisa P. Hopkins, and published by Lee & Shepard, Boston—"Educational Psychology" and "Practical Pedagogy."

The Reading Circle idea seems to have had its beginning in a London "Society to Encourage Home Study," about 1870. Two similar organizations were effected in this country two years later, followed by the Chautauqua Literary and Scientific Circle in 1880. The Ohio Circle, *for teachers*, came in 1883, and our own in 1884.

"The evident tendency of the Reading Circle, when rightly managed, is to free the profession of dogmatism, to broaden the intellectual views of teachers, and to enlarge their general culture. More freedom of thought, more general culture, and better conceptions of the world at large in the profession of teaching, are greatly needed, and it is the purpose of the Reading Circle to strengthen the profession in these ways."—*Ex*.

In the first general circular, issued by the board of directors, after setting forth the proposed work for three years, there was also included the following: "The work for the last year of the course has not been outlined. It is believed that the experience of each year will suggest modifications of the plan of procedure, and the course of study, that only experience can reveal. The above outline is but a general state-

ment of the present thought of the board of directors. They are waiting for more light and invite suggestions from all who are in sympathy with the movement to elevate the teacher's vocation to the rank of a profession."

The board is now considering the arrangement of next (the fourth and last) year's work, and will gratefully receive any intelligent suggestions from teachers or others interested. It is believed the three years' reading has been eminently profitable to those who have regularly followed it. That it may continue to be so, is their only wish.

MISCELLANY.

C. B. BECK will conduct a normal class at Camden during the spring term of his school.

A SPRING NORMAL was opened at Michigantown for a term of 10 weeks by J. C. Comstock.

T. D. AKER, a graduate of the State Normal, opened a normal and review term February 28 at Trafalgar. Mr. Aker is principal of the Trafalgar schools.

A SIOUX INDIAN will never sioux a man for a sioux of clothes, but his siouxan is siouxthd by a bottle of rum, that's nioux, to warm his nothes.—*Lowell Citizen*.

A SUMMER NORMAL will open at Jasper, May 2, and continue 12 weeks. The manager is county superintendent A. M. Sweeny, and the character of the instructors insure work of a high order.

THE CENTRAL NORMAL at Danville is largely attended this term, and its prospects are exceedingly flattering. Last year it enrolled about 1000 different students, and this year the attendance is still larger.

RISING SUN.—The public schools, under the supervision of E. E. Stevenson, are reported in excellent condition with a larger attendance than ever before. There will be 13 graduates from the high school.

QUERY.—How many feet of siding 5 inches wide will be required to cover the four sides of a house 40 feet long and 28 feet wide, 20 feet high, 4 inches to the weather, and 150 feet being deducted for doors windows, and cornice?

MR. MOSS, a teacher in Vanderburg county, has recently published an article in the *Evansville Journal* making a plea for district libraries as a means of education which deserves attention. Whether the plan he suggests, that of having the state provide the books, is better than to have them furnished by each township, may be questionable, but there can be no question as to the desirability of the libraries. ;

THE SUPT'S AND TEACHERS' ASSOCIATION held at South Bend March 18 and 19, was largely attended and the exercises were superior. Two lectures from President Jordan and one from Prof. Coulter were of themselves a grand program.

THE National Summer School of Methods, to be held at Saratoga, N. Y., will comprise twenty different departments, and instruction will be given by a faculty of twenty-six prominent educators. For details see advertisement on another page.

QUERIES.—1. In digging a cellar, the length of which was 6 times, and the width 4 times its depth, 192 cubic yards of earth were removed; what were the dimensions of the cellar?

2. Jones rented a house for 1 year, for which he was to pay \$300 quarterly at the close of each quarter; what is the equated time for the payment of the whole?

WESTFIELD.—The Union Academy, under direction of Dr. E. Test, is prosperous. He will add to his corps of teachers for the spring term Miss Mary Hawkins, of the State Normal. The lecture course, now closed, besides being of much benefit to the school and the community, yielded a respectable net balance of money, which will add some needed books to the library.

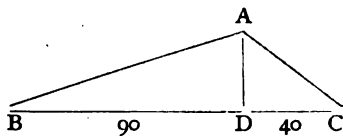
QUERY.—*Dear Sir*: In George C. Hubbard's excellent article on "The Syllogism in Arithmetic," published in the last Journal, I find the following equation: 10 pears = 30 cts. Now, if we subtract the same thing from both members of this equation, the results will be equal. Let us subtract 5 cents from each number, then 10 pears — 5 cts. = 25 cts. This result is evidently absurd, for the minuend and subtrahend are not like numbers, and the remainder, 25 cents, is not like the minuend, 10 pears; therefore, I conclude, that the original equation was incorrect.

J. P. FUNK, Corydon, Ind.

EDUCATIONAL.—The Illinois Wesleyan University, Bloomington, Illinois, has had before the public for nearly fifteen years, a Department of Non-Residents, matriculants in which follow prescribed courses of study, upon which examinations are set, and receive proper degrees on completion of their work. The Department is modeled after the operations of the London University, and, like it, offers opportunity for doing systematic study to professional and other people who are debarred from residence at the seat of a University. Particulars regarding matriculation may be obtained by addressing Prof. Chas. M. Moss, enclosing stamp.

PROBLEM.—*Dear Sir*: The following problem, proposed by me, is solved by Mr. Powles in the November Journal: "A straight line is drawn from the right angle, perpendicular to the hypotenuse of a right angled triangle dividing it into two parts, 90 and 40 rods each. Find

area of the entire triangle." His solution is correct, but rather abstruse. I will give one, which I think is better. It will be noticed that this solution is based upon the similarity of triangles.



when $\frac{90 \times 40}{2} + \frac{40 \times 40}{2} = 3900$ sq. rds. 3900 sq. rds. = $24\frac{3}{8}$ acres.

AD is a mean proportional between BD and DC. We then have the following proportion: BD : AD :: AD : DC or $90 : AD :: AD : 40$. Then $AD^2 = 3600$. $AD = 60$,

C. M. APPLEGATE, *Métamora*.

ANSWERS TO QUERIES.—The answer published on the 125th page in the February Journal, as given by Mr. J. C. Gregg, of Brazil, Ind., is not correct. Here is his answer, and the error:—

$$\begin{aligned} \text{A's } \$295,327 \times (6\% \times 7) &= 124,03734 \text{ int.} + \$295,327 = \$419,36434. \\ \text{B's } \$331,830 \times (6\% \times 7) &= 99,54900 \text{ int.} + \$331,830 = \$430,37900. \\ \text{C's } \$372,843 \times (6\% \times 7) &= 67,11174 \text{ int.} + \$372,843 = \$439,95474. \end{aligned}$$

Try again, Mr. Gregg.
Eaton, Ind.

Respectfully,

G. W. BLODGETT.

Queries published in March number of the Journal:—

No. 1. \$.20 = cost.

.4

\$.080 = gain.

\$.28 = selling price.

12% = amount deducted.

Hence, \$.28 = 88% of marked price.

\$.28 ÷ .88 = \$.31 $\frac{1}{11}$.

No. 2. The L. C. M. of 12, 30, and 75 is 300; consequently he must spend \$9.00 and buy 39 fowls. If he had bought the turkeys at 90 cents each, he would have spent only \$1.80 for each kind, thus buying 23 fowls for \$5.40. So he has bought 16 fowls too many and must forfeit \$.80.

No. 3. 49.947 rds., the diagonal of the square, is also the hypotenuse of a right-angle. By the well-known geometrical principle, the square of this is equal to the sum of the squares of the base and perpendicular; which in this case are equal each to each.

$2494.702709 = \text{sq. diag.},$ or 2 times sq. of one side. $1247.341354 = \text{sq. of one side.}$ $\sqrt{1247.3531} = 35.31 = \text{one side.}$ $35.31 \text{ rd.} \times 35.31 = 1246.79 \text{ sq. rd.}$ $1246.70 \div 160 = 7.79 + A.$

Cadiz, Ind.

J. HAYES.

ED. JOURNAL:—In the October Journal I asked for a good consistent reason for not capitalizing the word "earth" when used to name the planet on which we live. In the Nov. number Mr. R. S. Moore, of Courtland, Ind., gives a brief and courteous response. He says, "If a capital letter be used in this connection, one should also be used

when speaking of the sun, the moon, the sky, the air, and a great many other things of which we have only one of a kind."

Astronomers tell us that there are *many* suns and *several* moons, and, therefore, these words are *class* names, or common nouns. Yet, at least one author (Harvey's Grammar) classes "sun" with the proper nouns.

Each particular portion of the Earth's surface has its own particular ethereal canopy or sky. The word "sky" is frequently pluralized and is consistently a common noun. "Air" is the name of a substance, hence a common noun, like water, sand, etc.

But while these are reasons for regarding the above words as common nouns, I fail to see any whatever for so regarding the name of this terrestrial planet. Planet is the name common to these astronomical bodies, each having been provided with a special, distinguishing, individual, proper name,—as, Mercury, Venus, Earth, Mars, Jupiter, etc.; and I insist that it is as improper to decapitalize one of these proper names as another.

Mr. Moore says, further, that "The name of our planet when she goes out in company with her big brothers, is not Earth, but *Terra*." Now, Bro. Moore, there has been no time lately when Earth was not out with her big brothers and sisters. I rather like *Terra*, or *Geae* in mythology or classic poetry; but down here on the prosy Hoosier border, we are beginning to use the good, old homely English name,—Earth.

Excuse me, Mr. Editor, for pressing this question upon the attention of fellow-teachers, but I desire to know "the reason why."

Cannelton, Ind.

JOHN R. WEATHERS.

PERSONAL.

J. M. Culver will succeed O. E. Connor at Kentland.

J. C. Gregg is holding the Brazil schools in line, and graduates four from his high school in June.

M. J. Mallery still holds the fort at Danville. The State Board recently commissioned the high school at this place.

Alfred W. Bruner has resigned the principalship of the Paoli schools, having bought a half-interest in the *Paoli Republican*.

O. E. Connor, of Kentland, will take charge of the schools at Cannelton, *vice* J. R. Weathers, who has gone to New Albany.

O. L. Galbreath is the new Supt. of La Porte county. He has been appointed to fill the unexpired term of W. A. Hosmer, resigned.

Prof. E. E. Smith, formerly of Purdue, will engage to do institute work in this state the coming summer. Address him at Henderson, Kentucky.

Mrs. Mattie C. Dennis, of the Reading Circle Board, has been sick much of the time since the Holidays, but is now convalescent. Her many friends wish her a speedy and complete recovery.

Benjamin F. Taylor, who recently died, was a Hoosier, his home most of his life being at LaPorte. He was an author of high merit, both his prose and poetry ranking with the best. His little volume entitled "January and June" is a gem. He was an honor to the state.

T. J. Sanders, who has been doing very acceptable work at Butler for four or five years past, has been elected Supt. of the Warsaw schools to succeed Mr. Mather, resigned. Warsaw has done well in securing so worthy and efficient a man to take charge of their schools.

Miss Amanda G. Paddock, for many years past an efficient teacher in the Indianapolis high school, was married March 22, to Col. Thos. G. Sprague, of Detroit, Mich. Miss Paddock is a lady of culture and refinement, and the best wishes of a host of friends will follow her to her elegant Detroit home.

John P. Mather, for several years past the efficient Supt. of the Warsaw schools, has resigned his position and removed to Duluth, where he has engaged in business. Mr. Mather was one of our best superintendents, his schools comparing favorably with the best in the state, but the temptation of more money won him away. He will be missed from the educational councils, and the best wishes of numerous friends will follow him.

W. A. Hosmer has resigned the superintendency of the La Porte county schools to accept the position of deputy auditor of his county. If our estimate is correct, Mr. Hosmer was nearing the close of his sixth term as county superintendent, and it is safe to say that La Porte county has been rarely favored in a director of its educational work. He was one of the most efficient superintendents in the state, and his strict integrity was never questioned. The cause of education can ill afford to lose from its ranks such a man.

Prof. James G. May, the oldest active teacher in the state, if not in the United States, closed his last school at the McCosky school-house, Washington county, a few days ago. The venerable school-master is eighty-two years old, and has been in the harness, or actively engaged in teaching, about sixty-five years. He has spent 11,192 days in the school-room, and still is a successful and energetic teacher. The closing of his school was also on the fifty-eighth anniversary of his wedding day, and the neighbors crowded in and prepared a sumptuous repast, prominent in which was a huge wedding-cake.

BOOK TABLE.

PACIFIC SCHOOL JOURNAL, is the name of a new educational magazine published at San Francisco. John H. Pryor is manager.

THE CAVE METHOD FOR LEARNING TO DRAW FROM MEMORY: Boston: G. P. Putnam's Sons.

Madame Marie Elizabeth C  v   has a volume before the public giving, in a series of seventeen letters, a method of drawing, which she claims, can be learned without a master. The instructions are simple: A frame covered with gauze is placed upright before the student; through this he can see the picture or study to be copied. This model is placed at a greater or less distance from the gauze, according to the desired size of the work to be produced from it. The pupil makes upon the gauze a charcoal outline of the subject seen through it; he then copies this outline upon paper, correcting errors by placing the gauze over the work and comparing outlines, and then shades the

picture from the model. When finished, he puts it aside, and reproduces it from memory. This fixes the work, and the method of producing it, firmly in the mind. Madame Cavé advises drawing thus daily, and promises rapid advancement. She advises drawing, at first, from the flat,—afterwards, from objects,—which are to be placed behind gauze, outlined and shaded in the same manner as from the flat. By this means the author thinks a knowledge of perspective may be acquired without learning its cumbrous rules. The work is noticed by *Revue des Deux Mondes*, and recommended by M. Delacroix.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

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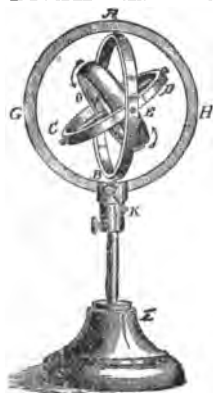
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INDIANA SCHOOL JOURNAL.

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No. 5.

"IN MY MIND'S EYE, HORATIO."

[The Annual Address before the Indiana State Teachers' Association last Holiday week was delivered by E. C. Hewitt, President of the Illinois State Normal School. The following is the secretary's report.]

ONE of the most hopeful signs of the times in the educational world is the attention given to mind study. We are passing out of the pedagogic state which concerns itself chiefly with empirical method, to that state which seeks to solve questions that underlie and give force to all methods. The true conception of mind, its nature, its powers, its laws of action and growth, is the fundamental thing in all questions of pedagogy.

There are a few points in which all students of mental science agree. One is that the mind itself is a unit, and that it is so intimately joined with the body that the whole man is a unit, complex, to be sure, but one. When the mind acts, as in willing, loving, reflecting, etc., it is the whole mind that acts, not some power, or part, or faculty of it. What we call the faculty of perception is the ability to perceive; the act of perception is the action of the mind in this direction.

Another point is that mind and body act together. It seems certain that mental action must be attended with molecular action in the brain. Such action is often attended by visible physical signs. What is the meaning of the knitted brow, the earnest look on the face of one intently engaged in thought, but that mind and body act together? Why, when one is walking, do his steps begin to cease when he is engaged in deep thought?

What do we mean by "reading the mind through the face," as we can, except that mind and body are working together? Then almost every emotion and many forms of thought have their appropriate expression of bodily action, and there are those who maintain that if one puts himself into this bodily action the thought, feeling, or emotion will be induced.

Precisely what is the relation of mind and matter is a point on which writers differ. One school would have us believe that action of the brain is the cause of mental action; that mind is the product of matter. Others teach that mind may prompt its own action. The latter opinion is the more reasonable. It is equally clear that a well organized, healthy brain, well fed, well used, joined with a good physical organization, is essential to the best mental activity; a fact of no small moment to teachers especially. It is a sad fact that a large number of our teachers are abbreviating their period of usefulness because of unbalanced earnestness; they are not caring for their bodies, and what they are doing for themselves they are doing for their pupils. So common is it to suppose that intense thinking must be accompanied by a feeble body that all the writers of cheap novels like to talk about the "pale intellectual student" as though it were necessary the two things should go together. We hear a great deal about "burning the midnight oil"—the poorest kind of grease in my estimation that there is.

And then we hear many people talking about "these poor worthless dying bodies, of how little value they are as compared with the immortal mind." At any rate during our present form of existence these immortal minds are dependent upon poor dying bodies, and we should care for the body for the sake of the mind.

The real difficulty in mental science arises from the fact that we are obliged to treat it logically. Many of our words are metaphorical, and metaphors are ill-adapted to exact use. Out of this fact grow many of the difficulties in psychological subjects. Hamlet, in discoursing with Horatio exclaims, "Methinks I see my father!" Horatio, his mind full of what he has to tell, cries out, "Where, my lord?" To this Hamlet replies, "In my

mind's eye, Horatio." I need not say to you that Shakespeare is a wonderful writer; the more we study him the more we shall wonder at how he touches all the realms of human life. The lawyer who looks at him with a lawyer's eye would tell you what a great lawyer he was; the physician would tell you he spoke of the circulation of the blood before Harvey discovered it, and psychologists will come to the conclusion that Shakespeare knew more of mental science than most men who have made it their life study.

Shakespeare here instances one of the most common facts of human experience. Who of us has not had presented to the mind a perfect image of father, mother, or other friends whom the grave may have hidden for years? Anything upon which our vision has ever rested may come up before the mental eye, and no other picture can have so great an interest for us as that which we carry in the chambers of our brain. And this is not confined to objects of sight alone, it is so with every sense. The songs our mother sang to us in childhood; the solemn sacred tunes that ring in the ears dulled by advancing age unheard by others; and who of us can not feel the touch of a hand that has been dust for years?

Nor is this power confined to objects of sense. The joys, sorrows, thoughts, and volitions of the past can be reproduced with equal certainty. Some authors say there are four elements in the act of memory; retention, reproduction, representation, and recognition. To my mind, representation is no part of the act of memory. Can the mind act with or upon anything it is not conscious of? If so, what is that action, and how is it performed? Does the mind act in any way upon what was once in consciousness so long as it is out of consciousness? Representation may be defined "the possibility of that which has once been before consciousness appearing again, it may be in response to the will or in opposition to it." Retention is no part of memory; it is that which makes appearance possible. I fail to see the distinction between reproduction and representation. It is inconceivable how a thing can be reproduced except as represented. The act of memory consists of two parts, reproduction and recognition.

The term reproduction is not quite exact. The thing once in consciousness is not quite the same thing in consciousness when reproduced. Hamlet's father, in his mind's eye, was not the same thing as in his bodily eye. The reproduction in memory of pain is not the pain I once felt. What name shall we give to the thing before the mind in reproduction? "Image" is used, but often will not do. What is the image of an odor or recalled thought? "Mental picture" is quite as objectionable; "idea" is no better. "Concept" is the best word for this purpose. I think all forms of mental reproduction are the work of the grand power of conception; the act of the mind by which it represents things is included among the acts of the mind working in its conceptive capacity.

Let me remind you that our special study is the representative power of the mind. Nor is the representative power concerned in the work of memory alone; it enters into and forms part of all our future dreams, asleep or awake, from the dawn of consciousness to the end of life. Every form of mental activity passes before the mind in an unbroken procession of mental concepts; change their order we may, but stop the procession we can not. It is an exceedingly interesting experiment for any one to remember what he had before his mind three minutes ago, and trace its connection with what he has before his mind now, and ask himself, "How did I come to think of that?" This procession ever moving on has a reason for the appearance of everything in it; each is called into place by some previous concept.

Most works on Mental Science give laws governing the order of mental concepts. These are called Laws of Association and Laws of Memory. Both are objectionable. The proper name is Laws of Suggestion. It is not with the laws of suggestion nor of memory that I propose to deal. There are two other forms of the representative power to which I will call your attention. These are Imagination and Constructive Conception.

In imagination we have the concept of an absent object, not as it is or was, but as it might be. In constructive conception we take the concepts of memory, modify them, join them together

and build up a complex concept in accordance with the dictates of fancy. No power of the mind is more important to our well-being than this, nor does the cultivation of any other power have a stronger demand upon the educator. By the power of constructive conception we put our interpretation upon our sense-perceptions, and draw from them their true or false meaning. A blind man feels an object upon all sides; conception comes to his aid and he decides that it is a sphere, or a cube. We all act in this way in our sense of touch alone. In seeing more is done than the cognizance of the picture on the retina; conception lies behind that.

The student of geography can make no progress until by the conceptive power he can see the spheres and circles in their right relations. Reading is worth little or nothing unless conception comes to its aid. All words that have any meaning are as symbols of concepts of the one using them; they must awaken similar concepts in the one who hears or reads them. The chief difficulty of the student in arithmetic comes from not understanding the words in which problems are expressed. The failure of the work in geography lies in the fact that the maps and books fail to awaken the proper concept. The student of history should see "in his mind's eye" the movement of the armies and the passing of events described. The first aim of the teacher in all these studies should be to put meaning into words. A sharp writer says, "Words are of no use but as they acquaint us with the facts and objects in the world of nature about us. We educate the mouth more than we do the mind; so we have more talkers than thinkers." The main purpose of language lessons should be to fit the words to the concepts for which they stand. The foundation of all true concepts lies in the sense perceptions, and the first work of the child is the getting of concepts for future thinking through the right use of the senses.

When the concept of the speaker or writer arises in the mind of the hearer or reader, then the medium of thought is clear. When silent reading causes the same concepts to arise in the mind of the reader that were in the mind of the writer, then only is one prepared to read effectively. The child will always read

well when his mind is possessed of the force of the words he utters. To lead him into this state is the work of the successful teacher, but not to read for him in order that he may read.

We speak of bright and dull minds. The bright mind catches the meaning of words quickly, while the dull mind has not a ready response. It is apparent that all works of art or facts of nature mean much more to some than to others. The difference is due to the mental preparation of the hearer or observer. No sermon, book, statue, or flower can have any meaning to a man beyond which he is able to put into it. What we carry to church, library, field, or forest, must determine largely what we bring away with us.

Another important consideration is this, that the concepts which bear sway with us in childhood influence us in old age; the impression at least will remain. I tell you truly I would rather see the new moon over my right shoulder than over my left; I do not like to sit down where thirteen are at table, nor to watch a friend until he goes out of sight. Not because I believe in these old superstitions, but because I have heard these things in childhood and I can not get their impression out of my mind to save my life. What punishment is severe enough for those who poison the minds of children with superstition, unreasonable fears and unjust prejudices, fears of the darkness, and make them afraid of harmless lizards and worms?

There is a prevalent notion that the Imagination is of but little value and is a source of much mischief; that it can not do one the slightest good, but may do much evil; that a truly earnest man has little use for imagination, and it is a question whether it were not better if it were dispensed with altogether. These are some of the uses of the power: It is a source of much pure enjoyment; the perusal of light fiction may furnish much real pleasure and add no sorrow to our lives. It may lighten life's burdens. The little boy walking with his grandfather becomes weary and wishes to be carried. His grandfather gives him his cane and persuades him to make a horse of it. In this flight of fancy he forgets his weariness. And to the weary teacher at the close of an "unlucky day," after the roguishness of the little ones

is forgotten, comes the thought that "these boys and girls by-and-by will do good service in the world and remember me with pure affection," and the teacher will go home with a lighter heart. Many a weary man in his daily toil finds his toil less heavy when his imagination pictures the comforts it may bring the wife and children.

We all recall to mind one who "for the joy that was set before him endured the cross, despising the shame." Imagination reaches forward to a home beyond the clouds, radiant with hope and joy, and cheers us with the thought that "every cloud has a silver lining. Imagination gives vividness and force to language. Without it how dull language would be, either written or spoken. Imagination is the soul of poetry. Take these gems from Shakespeare:—

"How sweet the moonlight sleeps upon this bank!
Here will we sit, and let the sounds of music
Creep in our ear; soft stillness and the night
Become the touches of sweet harmony.
Sit, Jessica: Look, how the floor of heaven
Is thick inlaid with patines of bright gold;
There's not the smallest orb, which thou beholdest,
But in his motion like an angel sings,
Still quiring to the young-eyed cherubims:
Such harmony is in immortal souls;
But, whilst this muddy vesture of decay
Doth grossly close it in, we can not hear it."

This, from Macbeth:—

"To-morrow, and to-morrow, and to-morrow,
Creeps in this petty pace from day to day,
To the last syllable of recorded time;
And all our yesterdays have lighted fools
The way to dusty death. Out, out, brief candle!
Life's but a walking shadow; a poor player,
That struts and frets his hour upon the stage,
And then is heard no more; it is a tale
Told by an idiot, full of sound and fury
Signifying nothing."

Without imagination how would the play of wit and humor be possible? It is the basis of the whole structure of fine art. There is one aspect in which all the arts are alike: in the com-

pleted work is the ideal of the author; that which awakens in the mind of another the ideal in the mind of the author. The true work of the teacher is a fine art, because it gives force and essence to all the fine arts. The most important service of imagination is in furnishing models for excellence. It is the foundation stone upon which rests the observance of the "Golden Rule."

The objections to the imagination are:—

1. Too great indulgence in it wastes time and weakens the mental powers. That is the trouble with the day-dreamer.
2. The imagination may add to life's burdens as it always does to those who look on the dark side.
3. The imagination may lead one astray if he mistakes the ideal for the real. That is the trouble with those we call visionaries; it is the trouble with the dupe, the gambler, and the speculator. And yet the imagination has its use in business affairs.
4. Often the imaginations are the parent and the product of debased characters. When the mind is once polluted in this way the evil influence remains. As the imagination gives a high ideal of a noble character, so it may give those that debase and destroy.

The imagination is conspicuously active in children, and this means that it should be trained childhood. Happy is the child whose mother or teacher is capable of training it wisely.

THE INDIANA TEACHERS' READING CIRCLE.

BY R. G. BOONE.

EVERY enterprise looking toward the bettering of the schools, must more or less regard the teacher. That which chiefly distinguishes a child's school learning from what he gathers elsewhere, is the presence of a positive, authoritative guide in the person of the teacher. After the child himself, *he* is the initial factor in all school culture. The text itself is not more suggestive of what shall be studied than he. The best books are poor enough if indifferently used; the poorest, excellent, in the hands

of quality. Both text-books and course of study vary as does the instructor. Indeed every intelligent, thoughtful man, who speaks from within the system, knows how unequally may be filled the same syllabus by two teachers. To one the merest skeleton is an abundant suggestion; to another the most, well said, seems yet too little.

It is then but restating an often-quoted truism to say, that the teacher, largely in matter, chiefly in method, almost wholly in inspiration, is the measure of his school. But in these rapidly developing yet uncrystallized American states, no scheme for the improvement of the teacher, promises even fair success that fails to take account of the non-professional class. *It* is the majority school influence of a half million children in Indiana. It gives character to the ungraded schools of seventy-five counties. Nor is its effect wholly evil; it has for certain current social interests some redeeming features. But the fact remains, of the 13,000 teachers in Indiana it is estimated that not more than one-fourth to one-third have even a partial professional preparation for their work; sixty percent annually assume their duties with little more than the meager fitness that comes from their own scholarship—often incomplete—generally far from liberal. Three to one—counting heads—the argument is against the professional aspect of teaching.

Grant that we have a Science of Education among us, it still remains that most schools have not been reached by it, or but indirectly and in fragments. Educational periodical literature—the most efficient of these collateral forces—is eminently suggestive, and provides wholesome inspiration; but it is rarely constructive or philosophic. It may be explanatory or critical; it is chiefly didactic and more or less disconnected.

The burden of Indiana's educational future rests, therefore, it would seem, upon this fact: The schools can only be improved through the elevation of the teachers as a body. And whatever may be the saving influence of the few wise, judicious, skillful leaders in education, the ranks must be advanced else the majority interests suffer.

The grounds for any plan of promoting their general or professional culture, therefore, find excuse in this unequal fitness

for their work in a great majority of our class. Add to this the fact that many are so engaged but temporarily, and yet more are either unable or indisposed to take time and means for a formal training; and the improvement of the teacher class presents itself as a question both important and complex.

Out of this condition of local school affairs come certain suggestions whose appreciation will render more clear the following report concerning the

INDIANA TEACHERS' READING CIRCLE.

I. The few professionally prepared teachers, either from schools of repute or from well directed private study, suggests the need for well-chosen reading—intelligently done—in the line of "educational literature." Teachers—so far as may be—should be authority on matters educational; just as, and for the same reason that the physician is in Therapeutics, the minister in Theology, the farmer in Agriculture.

But along with present inducements, neither teachers can be depended upon to seek, nor schools of the right sort to furnish, the formal training that would be desirable. For the great bulk of teachers as for the majority of housewives, the education which they get must be brought to their doors. Modern comforts and modes of life have encouraged this spirit.

The Press is an educator in every family; the club and lecture are almost universal, and the Chautauqua—the ubiquitous University—is the climax of educational convenience. Through the utilitarian spirit of the age, we have come to claim the comfortable service of a ministering public as a kind of right. Whatever may be the ultimate cause of this, we are all more or less in the current; the professional training many of us are not only slow to seek, but indifferent about accepting when offered.

It is, then, no discredit to the really professionally-spirited man or woman to say, that for years to come, in this western country—half-cultured, half-frontier life—to hold up the standard of excellence to even a fair measure, will require much effort, upon the part of the few. Unless there shall be demanded of every applicant, who thinks to serve the state as teacher, a formal and satisfactory preparation, the many transient, imperfectly

schooled, non-professional members of this class, must be given other inducements and opportunities to receive an approximate training for their work. Hence the Reading Circle.

Not only so, however. The reading suggested has a value of no inconsiderable importance to the professionally-spirited teacher, also, of good scholarship, and formal training in the thought and methods of teaching. The comparative study of a principle so comprehensive as that of the culture of a race, is the task of a lifetime. Brooks and Watts and Hewett and Hailman have each made their contributions, whether much or little, to the great fund of knowledge, to which your experience also is expected to contribute, and which intelligently used, may be the ground of a large part of your experience.

I apprehend there is no teacher in Indiana to-day, who would not be abundantly repaid by a perusal of any book offered in the course. Well read, it must serve the less professionally inclined as a source of authority and direction; for others, the more thoughtful, the better prepared, of broader culture and more generous ideas of the school, the course will serve, as it should, for a *text* only; an outline, suggesting much personal and private study; a syllabus, to be filled up and enlarged and revised, and so made an individual possession. Hence, again, the Reading Circle.

It is believed there is so opened up a cheap and efficient means of professional culture to both classes, many of whom find their time too much occupied and their means too meager to admit of continuous attendance at professional schools.

II. Then, again, the narrowness of culture incident to one whose scholarship is limited, and who thinks and reads chiefly in the line of his business, suggests the need of some inducements to *general culture*. Other things equal, he is the best teacher who is most familiarly acquainted with the best thoughts of the best thinkers and writers of the past, and who, along with his classic and standard science studies, carries a heart in sympathy with, and a mind open to, the influences of modern, current, social interests. If the generation of to-day is to use the shoulders of the past on which to stand for new reaches, then

the past must be known, her literature and her history must be made the basis of a vast culture effort. Herein is wisdom shown. He who would be most efficient professionally, must be more than professional. Hence the General Culture line of the Teachers' Course.

It is perhaps not necessary—possibly it would not be here in place—to discuss the relative merits of the two lines of reading. It is sufficient to say that, early if at all, teachers need the professional study. The principles of their teaching, the nature of mind, reformativè theories and influential school men of the past should early be made subjects of thought and investigation. For a teacher, once in the work, giving himself, as he can, further qualifications—if either must wait, surely it should not be the tool-line of his business. For the teacher anxious to improve, however, it seems no very difficult matter to find time and interest to take both lines together. Indeed the impression is growing, here and elsewhere, that the Indiana idea of a Reading Circle is not only theoretically sound, but practicable. The prominence given to professional work makes it a "Teachers' Course"; and the additional subjects give breadth and proportion. We may therefore fairly anticipate, I think, as a result of this course, or some similar one, well followed: (1) That the non-professional class will grow relatively smaller; (2) that the average length of service will be augmented; (3) that the standard of a teacher's necessary culture will be vastly elevated; (4) that the aspect of teaching will show a change from that of a business to one professional.

The numerous collateral advantages that must grow out of these, the more rational teaching in the school-room, the dignifying of education, the increase of salaries, the better organization and command of educational forces, and the like, will be apparent to all. That any substantial line of study, well read, will make better men and women goes without saying: its corollary is that from their better manhood, there must result fairer educational influences.

III. The advantages I have named thus far have been largely individual. Besides these, however, much good, it is thought,

must come to our schools and school system from this co-operation of many in the same specific interests. In homogeneity of culture is the source of not only political, but professional influence. In community of interest and identity of aim is the union that is strength. Three thousand Indiana teachers, busied with the same best thoughts, questioning of child nature and child rights, and child culture; familiar with social interests and state claims; solicitous to know the sphere of state education and the province of the school; are an army at once formidable and aggressive. They constitute a minority such as might, in another decade, revolutionize Indiana schools.

The Reading Circle has this general, ~~and~~ simultaneous, and uniform improvement of teachers as its aim. Its means may be wrongly chosen, or badly used; its administration may be specifically injudicious; its claims may be misunderstood; but its purpose—the advancement of Indiana teachers, and through them Indiana schools—is I submit a worthy one. No merely personal preferences should be allowed to stand between the organization and the attainment of this object.

This leads me to speak more particularly of the recent and *present condition* of the *Circle*, and certain features of its management, which teachers are entitled to know, and in which some may find a personal interest. The current course of professional reading is believed to be a fairly representative one. It certainly is not such as some teachers would have chosen for themselves; but it will be borne in mind that certain conditions have more or less hampered the board in its selections of books. (1) The course must be sufficiently light—that is, be included in brief texts—so that the average busy, otherwise occupied common school teacher may not find the work grow burdensome on his hands, and so become indifferent to it, or discouraged at his failures. (2) It must be sufficiently elementary to attract the class most in need of this organized assistance—those who have little or no professional training—and yet comprehensive and critical enough to serve as a text upon which the more mature and thoughtful readers may hang their wider study and their personal conclusions. (3) A fair balance must be maintained between the two lines of study.

Regarding these conditions, the conclusions are evident that while the heavier books must be avoided, it must not be at the expense of the quality; that such books as are upon market, afford the only room for choice; and that the general demand should determine the nature of the "General Culture Course." The list as submitted for the three years since September 1884, includes the following texts: Hewett's "Pedagogy," Brooks' "Mental Science and Mental Culture," Parker's "Talks on Teaching," Hailman's "Lectures on Education," "Watts' "Improvement of the Mind," Barnes' "General History," Smith's "English Literature," and Greene's "Short History of the English People." The course for the current year includes Hailman, Watts, and Greene. It involves the careful reading of 6 to 8 pages a day for seven months in the year.

This seems to be not an unreasonable amount for one who has any time so to use and an earnest wish for self-improvement. At no time has it involved more reading since the course was organized. It seems it should not include less.

The number of readers at present is about three thousand. Not all the reports are in, even from counties that are known to be taking the course. I say "*readers*," for some are known to have purchased books and to be doing the work, whose names have not been reported to the central office as members. Since its first organization in 1884, the membership has been slowly but constantly increasing. Yet it is certain that a large number of teachers are using the prescribed books, and more or less fully following the course, who have no connection with the organization. Without doubt, in *so* much, it is a gain to the teachers, and so, somewhat of gain to the state: but the highest good of the circle, as an organization, it is evident, can only come when it has enrolled the great body of the two classes of teachers named, all co-operating, positively, to a common and well defined end.

If advantage—either culture, or utility so-called—is to come from this reading, it is believed more profit will accrue from an organized effort. The occasional individual may succeed in working independently; but most of us accomplish the best re-

sults, and most uniformly, under the stress of influence. Not only to afford this opportunity, but through the force of organization to supply an incentive, is the two-fold aim of this enterprise. The one great want is the efficient and uniform presentation of Reading Circle interests to the teachers of the state. It would seem this might be accomplished at the annual county institutes. It has been done over a part of the state. But four-fifths of these sessions—or an average of fifteen per week from August 1 to September 5—being held during the summer, makes it so difficult to reach them, that comparatively little has been done. The success of the Circle must largely depend upon the work done, not in the central office or by the board of control, but by friends in its interests throughout the state.

Those who know the enterprise best, are persuaded that all has been attained that might fairly have been expected; but they are also convinced further that, whatever deficiencies exist, they come not from the unwillingness or opposition of teachers, but because the organization has been not understood or misunderstood. In the beginning, here as elsewhere, the Reading Circle was an experiment; teachers were fearful of committing themselves; its directions were frequently (unintentionally) misconstrued; its regulations have occasionally been ignored, as something personal. In certain counties it was first thought to be an order of the State Board, and, when found to name only a voluntary association, lost dignity. Elsewhere it was thought to be a kind of scheme to unjustly examine and somehow deprive of their places, such as were not in a supposed ring. Frequently it has been asked whether, if teachers did not do the reading, they would receive fair treatment at the hands of examiners and stand so well with the State Board.

It is needless to say that all these fears have their only ground in an ignorance of the nature and aim of the Circle. Confidence has always been given when it has been understood. So I say, the pressing need now is some means of properly setting the organization before teachers, and by fair pay for services or otherwise, of enlisting all county superintendents in the work—superintendents who are, many of them, already overburdened with educational interests, and poorly paid at best.

Every county institute held should include a "Reading Circle Session," not an hour or a talk simply, but a half day given up to the discussion of past and prospective work of the local organization. It would be the means of not only popularizing the work, and giving it efficiency within, but increasing the membership as well. Nothing succeeds like success; the best speech in its favor is a well managed local organization. But the nature of the work must first be understood.

During the next few months every one of the ninety-two counties in Indiana, and so far as possible every teacher in these counties, ought to be reached by some one, or by some paper or letter, that the matter may be put and kept honestly and plainly before teachers. An hour or a half-day in an institute, to be profitably spent must present the subject intelligently: discussions left to the chance impulses of the teachers, or to their prejudices and merely personal preferences, must largely fail.

[Translated from the German by Howard Sandi.on.]

GEOGRAPHICAL INSTRUCTION IN GERMANY.

LOWER SCHOOLS—INTERMEDIATE SCHOOLS.

General Regulations of October 15, 1872.

THESE schools shall, on the one hand, give their pupils a higher education than happens in the common schools of several classes, but on the other side, also, they consider in greater range the needs of an industrial life, and of the so-called middle rank, than this can regularly be the case in the higher educational institutions.

These [the middle schools] shall exist, in addition to the common schools of the place, and shall have at least five graded classes with a maximum number of fifty pupils each.

It may, however, be permitted, that, the higher classes of a public school of six classes [shall] work according to the plan of instruction of a middle school.

The instruction shall be imparted in harmony with the following plan, which is arranged for a six-class school. In the lowest (vi) class of the same, the children are received at the beginning of the compulsory school age (sixth to seventh year of life).

	VI	V	IV	III	II	I
Religion.	3	3	3	2	2	2
German, inclusive of Reading and Writing	12	12	12	8	6	5
Arithmetic.	5	5	5	3	3	3
Geometry				2	2	2
Natural History.				2	2	2
Physics, (in I Chemistry).					2	3
Geography.			2	2	2	2
History				2	2	2
French (or English)				5	5	5
Drawing.			2	2	2	2
Singing	2	2	2	2	2	2
Gymnastics.	2	2	2	2	2	2
	24	24	28	32	32	32

With five classes the lessons of the three lower classes are distributed among two classes; with more than six classes an enlargement of the work occurs instead.

Out of the regulations concerning the separate subjects of study the following are here brought into the foreground :

The lessons in German in the VI and V classes are to be utilized also for exercises in *observation*, as well as for *language* exercises.

IV. The principal aim of this class [IV] is, that the pupils may be able to read fluently easy selections in language, unknown to them up to that time, with an emphasis betokening an understanding, and to write moderately difficult dictations in correct spelling.

Exercises in oral narrations of that which has been read, are here, as in all the following classes, an important part of the instruction in German. The composition exercises begin with the reproduction of short narrations given by the teacher, or with descriptions prepared during the instruction.

III. As before, with more difficult material.

II and I. A comprehension of model selections of German prose and poetry.

In schools which have more than six classes, works [such] as Minna of Barnhelm, Hermann and Dorothea, Tell, Wallenstein, etc., are read connectedly.

Geography. IV. The home region. That which is most important concerning the phenomena of the atmosphere, concerning the horizon, concerning the sun, moon and stars, day and night, and the seasons. Introduction into map representation.

III. Form and motion of the earth. The mathematical net, [i. e., lines of latitude and longitude.] Summary of the continents and of the oceans. Europe in general, especially physical.

II. The chief facts out of the physical and the political geography of all the five grand divisions of the earth.

I. *Germany*. The Prussian State. Comprehensive review of the whole work during a more especial prominence of mathematical geography. In a school of more than six classes besides an enlargement of the work, a more accurate account of *foreign* lands may be given. The use throughout of good maps, globes and tellurians; also the pupils must be in possession of a good atlas.

History. III. Biographies out of the general history of all periods. Stories out of the heroic age, and out of the ancient period are to be more freely imparted; out of the middle age and the modern period only the history of the best known men, such as Charlemagne, Frederick Barbarossa, Frederick the Great, and the like.

II. Biographies and accounts out of the general history of all three periods, in which the history of the founding and propagating of the Christian Church, and the narration concerning those events and men that have exercised an especial influence upon general history are brought into special prominence.

I. Biographies and pictures of the life out of the general history of all three periods, whereby, however, those out of the history of the fatherland are made especially prominent, and events, as the Seven Years' War, the War for Freedom, the German, the German-French War, are treated in connection. In a school with more than six classes the communications are to be given more amply, and more can be taken into the narration out of the history of the ancient period, and out of that of peoples other than the German.

The instruction in the lower classes may be imparted by specially well qualified common school teachers; the instruction in the higher classes by those teachers who are recognized as fitted thereto according to the standard of the regulation test for middle schools. In this test the candidate has to fulfill, besides the qualification of a common school teacher, a special condition, according to his choice, either (1) in Religion and German, or (2) in Religion and History, or (3) in the Mathematical and Natural Science subjects, or (4) in two foreign languages.

Geography has been hereby, (ministerial regulations of May 9, 1873) reckoned among the mathematical and natural science subjects, corresponding to the present aim of these sciences. This connection is obligatory.

There is required besides (in an oral test) a knowledge of physical and mathematical geography. A detailed knowledge of the physical and political geography of the separate continents. A familiarity with the means of teaching for geographical instruction, especially the best atlases, maps, globes, tellurians, and an insight into the method of the subject.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

THE FUNCTION OF BOOKS IN TEACHING ANY
SUBJECT..

THE end or aim of teaching any subject is two-fold: 1. To give increased power of dealing with its subject-matter; 2, give systematic and reliable knowledge of this same subject-matter. In practice these two aims can not be separated. There is no such thing as giving culture or power, without knowledge, and, conversely, no true knowledge is possible without gaining power along with it. If, then, we answer the question how give increased power, the question how give true knowledge will necessarily have been answered, and *vice versa*. What then is a true knowledge of a subject?

To answer this question definitely, subjects must be classified into two kinds: *a*. Those in which the learner deals first-hand with their subject-matter. *b*. Those in which the learner deals second-hand with the subject-matter. Arithmetic, language, botany, zoology, and the like, are, more or less purely, subjects of the first kind. History, geography, and the like, belong to the second class. The chief difference between these two classes of subjects should lie, more than anything else, in the use of the student's power of observation. In those subjects with which the pupil deals first-hand, he should get his foundation of facts by observing the phenomena that constitute their subject-matter. In the case of the second class, he depends on the observation of the phenomena in part by others, but, in every possible case, the subject has meaning to the pupil *only so far as he interprets the observation of others in the terms of his own personal experience*.

We can not remember too pointedly that the student in history will, of necessity, interpret all events past and present, in the terms of those happenings which have come before his eyes; and that the student of geography will interpret all places, peoples, forces, and elements in terms of localities, people, forces, and elements which have come under his immediate observation.

So far, then, as observation is concerned, in the two subjects named, the teaching should do two quite distinct things: teach the pupil to interpret the observation of others in terms of his own, and teach him to use his own observation more efficiently in gaining direct personal experience. The latter statement must hold, because, in no case can we assume that the power of observation exists sufficiently developed previous to the study of the subject, or any part of it.

But we are answering the question what is a true knowledge of a subject. It is this: that knowledge which comes from exact observation, fixed names, precise definitions, classified arrangement and rational explanations. *It is not* verbal memorizing of the results of these processes. Everybody is theoretically agreed that it is not, and yet, practically, most of us go on exercising our pupils on such memorized results.

No book can furnish observation ready-made. It must be *done*.

A good book can furnish the names used in any subject, but it can not apply them.

No book can furnish definitions ready-made. This seems a paradox, but it is not.

No book can furnish the classifications of a subject ready-made.

No book can furnish to pupils ready-made explanations.

A good book can do much to direct the pupil's observation. Or, a good book may furnish a record of the observation of others, and give directions how these may be interpreted by the student.

A good book can give the names of a subject and tell how to apply them.

In short, a book gives no material.

The material of every subject lies in one's personal experience of its subject matter, or in one's interpretation, in terms of his own experience, of the experience of another. ♦

The entire reformation of modern "memory-pegging" lies in these statements. As we can not fly away from our center of gravity, so we can not fly to results except through the process by which mind naturally reaches such results. *Books are not*

such processes, but only the occasions of them. The advocate of mere book-knowledge covertly makes an assumption that is never tolerated in school-teaching, viz., that the pupil has ample store of observation and needs no more. He has just as much right to assume that memory or thought needs no training or material as to make this assumption with regard to observation. All faculties need material and training. Books have no more power of training one than another, and have relatively little power, alone, of training any. They have no power of adjusting themselves to the pre-existent state of the learner's mind. This fact distinguishes them from the living teacher. But, with a living teacher and a living activity on the pupil's part, they become valuable means.

S. S. P.

THE HABIT OF RUNNING WORDS TO THEIR EXACT MEANING.

THE ease with which a feather knocks the ordinary pupil out of time, if such feather be an inquiry about the exact meaning of some term, suggests that something needs to be done to give the pupil backbone. At the first intimation as to the meaning of a suspected expression, the pupil's knees usually begin to knock, at the requirement for a new meaning, he gets ready to crawl under the desk and pull the desk down on top of himself, and whoever is heartless enough to continue prodding such a sufferer with cruel questions will be met either with impudent bravado or with agony of countenance and approaching imbecility of mind. John and Thomas, Sarah and Susan will speak up manfully and declare a noun to be a name. They will, on requirement, assert this commonly undisputed piece of mental philosophy, loud enough to be heard around the next corner. They stand erect, heels well together, and chest inflated, while giving this valuable piece of knowledge to a waiting world. But let some barbarian be impudent enough to ask, "But what is a name?" and the whole *dramatis personæ* will collapse, like a country circus in a Dakota zephyr. The *esprit* is all gone, the heels have slid to a re-entrant angle and the chest sunk to an extent indicative of approaching tuberculosis. All the poor

struck mortal can usually gasp is, "A name! What's a name! Oh! Ah! Why, its a noun, to be sure!"

Under ordinary circumstances John and Thomas, Sarah and Susan have plenty of vertebræ in their backbone, but this time it is turned to jelly or otherwise allotropized. However, it is not worth our while to think their cases dangerous and send for aid, since they will recover as soon as the feather quits hitting and pestering them.

It has come to be almost brutal to inquire about exact meanings in our classes. A visitor who would so far forget our common humanity as to persistently follow up such a practice would render himself fit to be dropped out of the third-story window by a muscular janitor—at least so would the pupil's teacher probably think! It is a fact that it is bad manners to go about a house where we are visiting, and drag the old boots and shoes from under the stairs, point out piles of cobwebs in the closets, and unearth the grinning skeleton from the family closet. This is no doubt sufficient justification for the feeling that superintendents and other visitors should not prod around these uncomfortable matters.

There is, however, a way to prevent pupils from being knocked down with a feather. The remedy is as easy as it is radical. It will apply to the stupidest, as well as the brightest genius, of the school, except, perhaps, that the genius will absorb more of the remedy than the dunce or blockhead. This remedy rightly applied will so harden the pupils that they will brazenly stand up and look an inquiring vandal in the eye and refuse to be knocked out of time by a feather-weight question. Pupils have actually been known to turn the table on impudent and imprudent questioners and testers and put the latter in a corner and administer some of his own remedy to him. The recipe is simple, easy and mild, and no charge is made for it. It is to habitually exercise the pupil in examining the various meanings of the terms he uses and in the selection of the right one, requiring him to give reasons for the selection.

S. S. P.

It is one proof of a good education, and true refinement of feeling, to respect antiquity.—*Mrs. Sigourney.*

HINTS ON PRIMARY READING.

THE PRESUPPOSITION.—The child to be taught has a store of well understood words and of oral forms which he can use efficiently. The number of ideas and their single words is stated at from 300 to 700. Such a child has the ability to express himself naturally.

THE KNOWLEDGE AIM.—1. To teach the form of the written words corresponding to the ideas and oral words already known. 2. The association of the written word and the idea, and of the written and spoken words. 3. The joining of these words into sentences and paragraphs. 4. Spelling. 5. Pronunciation. 6. Capitals. 7. Pronunciation. 8. Writing of the written words. 9. Natural oral expression of the ideas, while the mind at the same time interprets the written signs.

THE TRAINING AIM.—1. To train the senses of sight, hearing and touch for the special ends of the perception and the recognition of words spoken and written. 2. Memory—to hold the forms given it and to readily associate the proper ones. 3. The imagination—to make clear pictures of things read about. 4. The attention—to lay hold of what is presented to it. 5. The will—to hold to two things at once.

THE DISTINCTION.—Primary and advanced reading differ in aim, in means, in method, and in presupposition: 1. In aims—the one aims at the forms and association of words and sentences, the other at the interpretation of series of sentences. 2. In means—the one exercises mainly on the written word and the written sentence, the other on the thought and its relations. 3. In method—the one, repetition of one thing, the other perception of many things. 4. Advanced reading presupposes primary reading.

THE MEANS.—1. The exercise of attention on the object to be learned, in the several forms of sense-perception, memory, imagination and will. 2. Devices to lead the child to see the form of the word. 3. Devices to lead him to associate new words or ideas with old ones. 4. Devices to secure right oral expression, connected with right visual interpretation. 5. Drill.

THE METHOD.—Must be one of two kinds: begin with the parts, or begin with the whole. Of the first kind—Alphabet Method, Phonic Method, Phonetic Method. Of the second kind—Word Method, Sentence Method, Phonetic Method, Phonic Method. Reasons for beginning with parts—simplicity, thorough learning of parts; reasons against—want of interest, gives no idea, an unnatural mode of procedure for children. Reason against Sentence Method—unit too large. Chief reason for Word Method—it enables interest and attention.

THE SCHOOL ROOM.

[This Department is conducted by G. F. BASS, Supervising Prin. Indianapolis schools.]

SHORT NOTES.

WHY will people persist in saying Cincinnatah, when the word ends with short i? Pupils insist on leaving out the first k-sound in Arctic; and they just *will* say Miz-zoo'rah. Of course, these are small things. The sun will probably continue to shine, even if these words are pronounced incorrectly.

IT DON'T.

A short article in a reputable school journal contains the expression "it don't" ten times. Correct these little mistakes; it will pay better than parsing the infinitives.

THE LONGEST TUNNELS IN THE WORLD.

The Mount St. Gothard Tunnel, Italy, is 48,840 feet long, or nearly 10 miles long, and the longest in the world.

Mount Cenis Tunnel, Italy, is 39,840 feet long, or about 7 miles long.

Hoosac Tunnel, Massachusetts, is 25,080 feet long, or about $4\frac{1}{2}$ miles long.

The Nochistongo Tunnel is 21,659 feet long, or about 4 miles long.

The Sutro Tunnel is 21,120 feet long, or 4 miles.

Thames and Medway, England, is 11,880 feet long, or about 2 miles.

HIS IDEA.

THE youthful idea of school has many illustrations. "Where are you going?" "To school." "What do you go for?" "To wait for school to be let out."

A sad comment upon schools. There is more truth in it than teachers care to admit. See to it that the little fellows (and big ones too) have so much to do, and of the proper kind, that they will not think how long it will be till school is out.

REMEMBER.

Remember to praise a pupil when he deserves praise. Don't make it the wishy-washy sort. Let it be a solid heart-felt "well done."

Remember to keep your own desk in order, if you expect the pupils to keep theirs in order.

Remember to laugh in school *sometimes*; it will do you good, and will do the school good too.

"FOLLOW NATURE."

The idea of a suspension bridge was obtained from a spider's stretching a web from tree to tree. The man who saw it "studied nature" we say. The teacher should follow the suggestions of nature. He should throw the spider and pupil together, instead of waiting for chance or *nature* to bring them together.

WRONG CONVICTION.

"No one can stand the feeling and conviction 'I am doing wrong'!" The teacher then should see to it that every pupil has a clear conception of right and wrong. A young child has only a vague idea of right and wrong. He is not bad, he is simply without character.

"DIDN'T THINK."

Teacher. What would you do if the room were too warm?

First Pupil. I'd sweat.

Second Pupil. I'd raise my hand and tell the teacher.

Tr. Give an example of the ball and socket joint.

Pu. The liver and brain.

WAIT.

WORK fast. Don't look for immediate results. A boy eats a good dinner to-day, and we do not refuse to give him another

to-morrow, even though we can not see that he is any larger or stronger. Work on the correct principle will bring the right results after awhile. Wait.

NONSENSE.

"A LITTLE nonsense now and then" will not hurt the wisest teacher. Your pupils will think none the less of you for an occasional relaxation of dignity. A perpetual frown and an ever ready reproof are hardly conducive to confidence, and without the confidence of your pupils you can hardly expect to do the best sort of work. We do not mean exactly familiarity, for that is not wise, but the wise teacher, while he may be ever so friendly with his pupils, will draw a line beyond which they will never think of passing, an impalpable barrier, but none the less a barrier. While the teacher must have the confidence he must also have the respect of his charges, and a teacher who has proper self-respect himself we think will rarely fail to secure it from his pupils.—*Ex.*

NAMING A LAKE.

YEARS ago, it was discovered that a certain lake, which had long been considered the head of the Mississippi, had no claim to that honor. The explorers found a new and smaller lake from which the great river took its rise. A discussion arose as to what name would be appropriate for it. The story is that it was decided in this way:—

"Let's make a new name by coining a word," said an old voyager. "Some of you learned ones tell me what is the Latin for *true*."

"*Veritas*," answered a scholar.

"Well, now, what is the Latin for *head*?"

"*Caput*."

"Now write the two words together by syllables."

The scholar wrote on a slip of birch-bark, "*veritascaput*."

"Now drop the first and last syllables, and you'll have a good name for this lake." And "*Itasca*" it was.—*Christian at Work.*

DON'T try to do everything in one recitation. Do a few things well.

"TIME'S UP."

Recitations are often closed on this account, and sometimes it would have been better, if the time had been up sooner. We do not favor an indefinite extension of the time, but we hate to conduct a recitation with the feeling that we eat at a "fifteen-minutes-for-dinner" restaurant, in constant apprehension of hearing the bell. We may be compelled to quit just as we have taken the first bite of a piece of pie. If we knew, as we do know in school, the exact amount of time at our disposal, we could order just about what we could finish in the time. True the beef may be tougher than we expected and the coffee may be hotter. If we had known this beforehand we would not have ordered it. We do not order fish at such a time as this, because we know that it will take too long to pick out the bones. We claim that the same common sense should be used in the recitation. When the time is up there should be a feeling of completeness with pupils and teacher. There should not be a feeling of surprise that the time is gone. There should not be a half-dozen pupils at the board with half-finished problems and a half-dozen more who have not explained, when there are good reasons why each one of them should be heard; and the teacher should not be right in the middle of an explanation that the pupils must understand before they can proceed with the work for the next day. These things will be stale by the next day, just as a piece of pie would be if left over. We well remember that when we poured out more molasses than we could eat mother used to set it away for us at the next meal. We never liked it. A warmed-over meal is never good. A warmed-over recitation is no better.

A teacher who knows his subject and his pupils, and his program, can so plan a recitation that when the time is up he will have accomplished just about what he expected. He may regret that he has not more time, yet he will have nothing left to "warm over." The following is a plan given by a teacher in actual practice. This plan, of course, can be only suggestive; because it was made for a special class under certain conditions that might not suit any other class existing:—

LANGUAGE LESSON—TIME 20 MINUTES.

- I. Reading and correcting sentences already prepared.
- (1) Exchange slates. Pupils mark mistakes.
 - (2) Pass slates to their owners. Correct mistakes and read sentence as corrected. Time 10 min.
- II. Oral work. Have pupils use the following in sentences:
- | | |
|---|--|
| <i>have</i> with a form of <i>lay</i> ; | <i>had</i> with a form of <i>lay</i> ; |
| <i>have</i> with a form of <i>lie</i> ; | <i>had</i> with a form of <i>set</i> ; |
| <i>have</i> with a form of <i>sit</i> ; | <i>has</i> with a form of <i>lie</i> ; |
| <i>lain</i> ; <i>laid</i> ; <i>set</i> ; <i>sat</i> . | Time 5 minutes. |
- III. Use ownership forms of the following in oral sentences: men; boys; lady; ladies; girl; horses. Time 5 min.

Many criticisms might be made on this plan, such as follows: Can not *always* be carried out. Will make the teacher mechanical, and thereby produce a stiffness in the recitation. It may take longer to carry out some parts of it than the teacher supposed. These and many more might be made, and we are willing to grant that there is truth in all of them; yet we say have a plan, and work to it as nearly as the circumstances will permit. Modify it when it seems necessary, and your lessons will have a completeness about them that they can not have without a plan.

The fact in regard to the above plan is, that it was *not* carried out exactly. It took longer to get through with the first part than the teacher supposed. Then, of course, the other parts were shortened, and there was a feeling when time was up that the points of the lesson had been made, and there were no regrets, expressed or understood. It seemed that everybody was ready for the closing when the time came.

WHAT IS WRONG?

PROBLEM.—Paid \$1200 for a house and \$300 for repairs; then sold it for \$2000. What did I gain?

A pupil having failed on this problem the following dialogue occurred:—

Teacher. What is the first step in this problem?

Pupil. To find the whole cost of the house.

T. How do you do this?

- P. By adding what it first cost to the cost of repairing.
T. Very good. What is the second step? P. To find gain.
T. How? P. By adding.
T. By adding what?
P. Whole cost and what he sold it for.
T. Suppose you bought a book for 25 cents and paid 5 cents for having it covered, and then sold it for 40 cents. How much would you gain? P. (After slight pause.) Ten cents.
T. All right. How did you get it? P. Added.
T. Added what? P. 25c, 5c, and 40c.
T. What is the sum of these three numbers?
P. (After a long pause.) 70 cents.
T. Didn't you say you gained 10 cents? P. Yes'm.
T. Did you get it by adding those numbers? P. No'm.
T. How did you get it? P. Don't know.
T. What did you pay for the book at first? P. 25 cents.
T. What did you pay for the cover? P. 5 cents.
T. What did they both together cost? P. 30 cents.
T. What did you sell it for? P. 40 cents.
T. How then can you find what you gained?
P. By subtracting.
T. By subtracting what? P. 40 cents.
T. What is the forty cents? P. What I sold it for.
T. What did you subtract it from? P. From whole cost.
T. What was the whole cost? P. 30 cents.
T. Which is the most, 30 cents or 40 cents. P. 40 cents.
T. Then can you subtract 40 cts. from 30 cts.? P. No'm.
T. How did you find the gain? P. By adding.
T. By adding what? P. Whole cost and what I got for it?
T. What was whole cost? P. 30 cents.
T. What did you get for it? P. 40 cents.
T. What is their sum? P. 70 cents.
T. Did you get a gain of 10 cts. by adding those numbers?
P. No'm.
T. How did you get the gain? P. Subtracted.
T. Subtracted what? P. 30 cents and 40 cents.
T. Did you subtract them both? P. No'm.
T. What did you do? P. Subtracted 30 cts. from 40 cts.
T. Well, now, that's more like it. Now how shall we find what the man gained on his house? P. By subtracting.

T. By subtracting what? P. \$2000.

T. What is the _____

Just here we left, wondering whether Job ever taught school. What *is* the matter? "That child is a fool," say you? Oh, no. "The woods is full of 'em." Something is wrong. What is it?

This is a sketch from life. There are many occurring daily in the schools. Let every teacher ponder it well, and decide where the mistake is.

N. D.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

—:O:—

WHAT PRIMARY WORK IS FOR.

IN a recent work on education the question is asked, "Is it the work of the teacher to make the mind *full*, or to make it *strong*?" Jevons says that the design of common school work is not to prepare for life in any technical sense, but *to elevate the standard of life itself*. That is, the main aim of the common school is not to prepare the pupil to be a farmer, a book-keeper, a lawyer, a merchant. The principal thing that is to be directly aimed at is to put the child in full possession of his faculties; to make him accurate and efficient in his thinking; to so equip him that he shall be able to reflect and to judge with precision in any set of circumstances. The school is to aim directly to make the pupil honest, accurate, and manly or womanly. The schools are to bend their main efforts to give the pupils *character* and *thinking power*, which constitute the best business training that any one can receive from any general school.

This important question as to the true aim of the common schools, which always meets the true teacher at the very outset of his work, has generally been answered by saying that *knowledge* is the real aim of all school work. But this is not the real answer to the question, "What is the *principal* aim of the *common* schools?" It may be true that the child's faculties are to be trained and sharpened by the use of knowledge, in order that

he may be enabled, by means of this increased power, *to turn about and get more knowledge*. But it does not at all follow, even if the ultimate object of the educated man is knowledge, that therefore the object of the common schools (the schools of preparation) is knowledge. Indeed, the very fact that the child's powers are immature, and require a period of unfolding, of development, of preparation, implies that *there is a necessity for unproductive practice* before the real harvest begins.

The question as to what is the immediate aim of the common schools will undoubtedly become more capable of an answer if the teacher will examine carefully and candidly the case of *the body and its preparation*. Let it be assumed that the ultimate object of all bodily power is the attainment of riches; it is nevertheless clear that health, strength, and aptitude for work, would be *the immediate aim* of bodily training. It is also clear that as to power, the less the training of the body were hampered by unduly exercising any one part, the better would be the result; and that if riches depend on a well-trained body, riches would be increased in direct proportion to the degree in which the whole body was trained.

The first object of a man, then, would be to train the body to be strong, without considering whether the exercise employed in doing this would make him wealthy or not. Any kind of labor, however much riches it produced, that made the body weak in its immature stage, would defeat the end proposed—the ultimate gaining of wealth. On the other hand, any kind of exercise, however barren, which made the young body strong and agile, would be the right kind of bodily training, and the most productive of riches in the end.

The true aim of common school education is strength of mind and character; and any process that conduces to give this kind of strength is the true process, even though little knowledge be gained by it. A weak mind, filled with facts collected from others, is not the end proposed, but *a mind able to collect facts and organize them for itself*. The mind requires healthy exercise; the aim of the common schools is *strength of mind and of moral purpose*, and it is a matter of comparative indifference whether

the years spent in the common schools—years of practice and preparation—are full of immediate gain (that is, of knowledge) or not.

DOES PRIMARY WORK INVOLVE THOUGHT?

THERE are four theories of the culture of the intellect. Each of these theories has two stages. The first stage of the first theory is *the conscious cultivation of the powers of perception, memory, and imagination*, by using concrete material. The thought as to the first stage of the second theory is that *all* the powers of the intellect should be exercised *in proportion to their development*, employing in such exercise, concrete material. The idea of the first stage of the third theory is that all the powers shall be exercised *equally* through the employment of concrete material. The thought of the first stage of the fourth theory is that the teacher should consciously cultivate the *thought powers* by means of concrete material. The mark of similarity in the first stage of the four theories is the means—concrete material.

In their second stage the four theories occupy common ground, in that the thought of each in the second stage is the culture of the thought powers by means of material that is, in the main, general or abstract.

The first mentioned theory seems to be the *prevalent* one, but this is not necessarily a proof of its correctness. Whether this theory is the prevalent one may be determined either by noting as a mark of our common school work the great stress of attention that is laid upon the importance of memorizing facts; or by noticing statements of educators in regard to the matter.

In order that this may be seen more clearly, statements of certain writers in regard to it are appended:

1. "Reasoning faculties are not developed until later years, therefore it is a mere waste of time to give the child work that will require an exercise of the reasoning powers."

In Perez' *First Three Years of Childhood*, p. 220, one finds (after numerous examples of their reasoning): "Children are thus capable of reasoning from their very cradles. Darwin, al-

though he does not fix the positive beginning of association of ideas in children before the age of five months, nevertheless notices a sign of practical reasoning in his little son at the age of a hundred days, when he slipped his hand along the finger held out to him in order to introduce it into his mouth. (See *Scientific Review*, July, 1877.) A child who cannot yet speak but is beginning to walk, stumbles in passing from the bare floor to the carpet. A moment comes when it occurs to him to raise his foot to a sufficient height to step over the border of the carpet without stumbling. Here is a middle term inserted between the end conceived and the point of departure. A little girl nineteen months old wanted to have my hat, which was placed on a table too high for her to reach: impatience, screams, tears. I get up and give it to her. Her first impulse is to put it on her head; then, after a few minutes, during which she seemed to be thinking, she went to fetch her own hat, which was on a chair within her reach, and presented it to me with a most serious expression. Was it a mode of thanking me, or an invitation to take her out? It matters little; but it was evidently analogical or even inductive reasoning."

It will be observed that the idea of Darwin and Perez in regard to the power of a child to reason does not agree with that presented in the statement first quoted. The probable reason is that Darwin and Perez studied the child himself, while the writer first quoted had studied about the child in some work on mental science.

Any competent primary teacher of the first year grade, by carefully observing the action of the pupils' minds for a single week, will obtain ample proof that they reason to a considerable extent in the presence of the concrete. And wider observation will convince that years before they enter school children exercise the powers of inductive and deductive reasoning on concrete material.

A more accurate statement than the one first quoted is—the *faculty of reasoning abstractly* is not developed until later years. One of the great blows at the efficiency of the public schools is this constant attempt on the part of many to inculcate in the

minds of teachers the idea that children of the primary grade can not reason. The true theory of the primary teacher is:—

a. The child of even the first year grade, has considerable power to reason in the presence of the concrete.

b. The development and manifestation of this power must be carefully watched.

c. The work must be so planned as to foster the habit of reasoning in the presence of concrete material, and to exercise the power to its *maximum* degree. Exercise to the maximum degree each power that manifests itself is the law of its growth.

To continue statements that give evidence of the prevalence of the first theory the following is cited:—

2. *"It (the child mind) not only acquires readily at this age, but it retains with astonishing tenacity. Let any one in advanced life compare the readiness with which he can recall what was committed to memory at this age with the difficulty he has in recalling what he has recently committed. This is the period then for storing the mind. Memory is the faculty to be especially trained and exercised at this age."*

The remarkable thing in regard to this statement is that it seems to assert the following, and to indicate that the result is worthy to be sought:—

a. In early school work the powers of acquisition and memory are prominently and spontaneously active.

b. Therefore these should be prominently exercised.

c. And the result will be that the mind in its maturity will recall with great difficulty that which it has purposely acquired at that stage (maturity) with the intention of retaining and recollecting it.

The fact that the powers of acquisition and memory are prominently and spontaneously active in the primary grades is clear enough, but it would seem that a conclusion other than the one given would follow, viz., that since nature provides that the powers of acquisition and memory are necessarily prominently active, it is not incumbent upon the teacher to concern himself to foster and increase the activity of powers that are by nature spontaneously very active.

The teacher who listens to nature's voice will hear three directions:—

a. Employ as the exercise-ground for mind in the primary grades, concrete material.

b. Consider yourself absolved from the duty of directly cultivating the powers of mere acquisition and memory, since, concrete material having been supplied, these from the inherent nature of the mind spring into prominent activity spontaneously.

c. Direct your conscious efforts, therefore, to the fostering, drawing forth and strengthening of the powers of judgment, inference, induction, and deduction to the maximum of their present capability in the child, understanding that thereby even acquisition and memory will be made stronger than if they were directly cultivated, for they will in this way be *interpenetrated with thought*.

Thus will the higher activities be carried back into the lower ones and acquisition and memory will be elevated into *thinking* acquisition and *thinking* memory. The result of such work in the primary grades and in all following grades will be that the mature person will be able to acquire more quickly, retain more firmly, and recall more surely than he could as a child, for under the tendency of the mind to act again as it has all his acts of acquisition and memory will be interpenetrated by reflection. It is not meant that the child is to be pressed into *abstract reasoning*, nor that he can sustain a logical chain of reasoning, but that it is natural for the child mind to spring into elementary acts of reflection and memory in the presence of the concrete. The primary teacher should observe the child carefully in order to detect these activities, and should so adjust the concrete material which forms the exercise-ground as to call forth the activities of thought to their maximum degree. This should be the chief study and work of the primary teacher, and not the cultivation of acquisition and memory, which spring spontaneously into a high degree of activity on the mere presentation of appropriate material without any effort on the part of the teacher. The only duty of the primary teacher in regard to acquisition and memory is to regulate and rationalize them, and this can be done only

by employing every day upon appropriate concrete material the powers of judgment and reason to their maximum capacity.

As a further evidence of the prevalence of the first of the four theories, attention is called to another statement:—

3. *“There is much in the child's lessons that should be committed exactly, such as definitions, tables, etc., that do not need to be fully understood at present. Who can not recall something of this kind that afterwards became a most profitable subject of rumination?”*

The prevalence of this idea has greatly damaged the public schools. It has done three things:—

a. It has encouraged the memorizing of things that could not be understood by the children.

b. It has encouraged the habit of neglecting to work out with the pupils many points that they are capable of understanding, because the working out may involve some difficulty, and because even if they are not understood now the children will in after years grow up to them, and they will then constitute “a most profitable subject of rumination.” The teacher should cherish as one of the cardinal principles the idea that *difficulty* in a point (provided the difficulty does not transcend the power of the child) is one of its chief educational values.

c. It has tended to conceal this great educational truth, viz:

Those ideas and that material which are best adapted to the present comprehension and needs of the child constitute the true exercise ground for the present and the best preparation for the future. An English writer of many years' experience in the school-room says upon this point: “Never try to fill the little mind with lumber under colour of its being of use by and by. Lumber does not excite thought, lumber does not interest; lumber does breed disgust. Nothing should be put into the mind which is not wanted immediately, and which is not also the easiest way of meeting that want.”

Errors, like straws, upon the surface flow;
He who would search for pearls must dive below.

—Addison—

É D I T O R A L .

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ABOUT 500 out of our 8000 subscribers still allow their names to stand on our unpaid list. With but few exceptions these subscribed with the understanding that they were to pay by January 1. Have they forgotten the agreement, or the date, or are they only careless? Good friends, please make haste, and do not put us to the trouble and expense of sending you "reminders." Send at once, and relieve your own mind and make us happy.

COLUMBIA COLLEGE, of New York City, celebrated its one-hundredth anniversary April 13, at which time it conferred the degree of Doctor of Letters upon Amelia B. Edwards, Alice E. Freeman, President of Wellesley College, and the degree of Doctor of Laws upon Maria Mitchell, Prof. of Astronomy at Vassar College. Surely the world does move. Horace Mann's idea that woman should stand on an equal footing with men, educationally, is growing apace.

THE NATIONAL EDUCATIONAL ASSOCIATION, to be held at Chicago next July, should not be forgotten. It promises now to exceed either of the two great meetings at Madison and Topeka in attendance, and its program is a fine one. As it is so near at hand Indiana will certainly be largely represented. It will perhaps be many years before it will come so close to us again. The next issue of the Journal will give rates of railroads and hotels and name a hotel as headquarters for Indiana teachers, and give other details. In the meantime let all arrange to go.

IT ISN'T FAIR for a subscriber to neglect to have the address of his Journal changed till it has been mailed to the old address, and then ask to have it re-mailed to the new address. Unless the notice for change reaches this office by the 25th of the month the probability is that the Journal for the following month will be sent to the old address. Our mailing lists are made up and put in the printer's hands at that

time. Twenty persons failed to get their Journals last month simply because they were late in asking for change of address. Such persons should write to the Postmaster at the old address instead of to this office. We are always glad to re-mail when a Journal has been lost by our fault or that of the mails.

THE READING CIRCLE EXAMINATIONS.

The Journal wishes again to urge upon teachers the desirability of passing the Reading Circle examinations, in June, on a part if not all the prescribed course. As stated last month more than three thousand have been reading in the course, and yet less than a thousand have paid their fees and reported to the board. The fee is a small one and was purposely made so that all might easily pay it and that none might be disposed to *shirk*. Unless all pay the board will not have enough money to enable it to do the necessary work. Certainly no teacher is willing to accept the privileges and benefits of an organization and then allow others to pay his share of the expenses. The amount saved on the price of one of the books will pay the fee. Pay your fee—and then be examined and make a creditable showing.

“THOU SHALT NOT.”

Without doubt every teacher and superintendent must sometimes say “thou shalt not”; but he who makes this the key-note of his government must fail of the best results. In infancy and early childhood the parent and the teacher must frequently say “don’t,” but the wise parent and teacher will study to reduce the use of this word to the minimum. The *Ten Commandments* that were given in the infancy of the race, are all positive, specific commands, and most of them begin with “thou shalt not”; but in due time the world was able to receive the Sermon on the Mount and the Beatitudes. The great mistake with parents, teachers, and preachers, is that they undertake to restrain and suppress the energy and surplus life of children, rather than to direct and guide them.

The parent who is continually saying “thou shalt not” is certain to early lose control of his children. The teacher who always has the word “don’t” on his lips is certain to have a disorderly school. The preacher who is ever and anon preaching against popular amusements without suggesting something to take their place, must expect to have his counsel ignored. Not long since a body of Christian people adopted the following:

“WHEREAS, Popular amusements are not only fascinating but intoxicating to all classes, and detrimental to Christian growth and the prosperity of Zion; therefore,

Resolved, That this Conference condemn popular amusements, such as social parties, dancing, skating rinks, theaters, and all games of chance."

In the discussion of the above some included base ball and croquet. Notwithstanding the fact that most of these amusements have been condemned by nearly every pulpit throughout the length and breadth of the land time out of mind, it is an undeniable fact that more church members indulge in them to-day than ever before. When parents and the church will make it their business to provide innocent recreation for children and young people, then and not till then will they be able to control them. They may *direct* but they can not *suppress*. The "over soul" of young people will out.

That is the best governed school which is governed through its activities. The problem in school government is, *how to keep the children busy*. A busy school governs itself, and an idle school no body can govern. A frequent use of "thou shalt not" is an unfailing sign of weakness on the part of the teacher. Remember that "substitution" is the only proper method of "elimination" in the problem of school government. Give the better method, the better thought, the better ideal, and the bad must give place.

✓ *CO-EDUCATION IN COLLEGES.*

Co-education is no longer an experiment—it is a demonstrated fact. None now question the ability of women to maintain themselves creditably in college classes, and none dispute the mutual refining and elevating influence exerted by the commingling of the sexes in college work, except those who simply theorize, and have never tried it.

In 1853, when Horace Mann organized Antioch College (the first college that guaranteed to women absolute educational equality with men), he argued that if young women were admitted in a college there should be women professors in the faculty. His theory was that young women away from parental influence, would often need caution, advice and suggestion, that could be much better given by women than by men. So he placed in his faculty two refined ladies. That Mr. Mann was right no thoughtful person can doubt. And not only do the young women need the counsel and example of cultivated women, but the young men as well need their refining influence.

In Indiana nearly all the colleges admit women, but several of them have no women in their faculties. An intelligent lady recently said, "I believe in co-education, and I would be glad to send my daughter to the State University, but I can't do it—there is no lady in the faculty." She raised the same objection to two other leading Indiana colleges.

The writer knows many other parents who hold similar views. They

will not send their daughters from home to a college where there is no lady in the corps of instructors. The Journal heartily endorses this sentiment.

THE DUTY OF SCHOOL TRUSTEES TOWARD TEACHERS.

The Journal wishes to repeat at this time what it has so often said before:—

1. Teachers who have taught good schools, have thereby earned the right to teach them again, and other things being equal trustees should give them the preference. A teacher who has become familiar with the children and the people, is worth more to a community than any new teacher of equal ability.

2. It is the duty of trustees in both county and city to let teachers know at the close of the school term whether or not their services will be required the coming year. If a teacher is not to be re-employed it is simple justice that he should know it early that he may have ample time in which to find another place.

3. In cities and towns it is the duty of the school board to give such teachers and superintendents as are not to be re-elected, ample notice that they may resign. It is hard enough for a teacher to lose his place without suffering the stigma of a dismissal. This is done in several cities at present, and the rule should be general. The custom in several cities of re-electing their superintendents *before* the close of the school year is a good one, and should also become general. The reasons for this are apparent at a moment's reflection.

Teachers have it in their power to bring about all these desirable reforms.

ELECTION OF COUNTY SUPERINTENDENTS.

Next month it becomes the duty of the township trustees to select a superintendent of schools for each of the ninety-two counties of the state. This election is of more importance to the people than is a state election. It matters little to the people generally who is governor or who fills the state offices, but it is a matter of vital interest to them who is their county superintendent. This officer, who fixes the educational and moral standing of the teachers of the county, exercises an influence in every school and in every family. No other officer, state, county, or township, has it in his power to make himself felt for good or for ill by so many people.

This educational interest is the greatest of all interests to any community, and the leader of this interest should be the most efficient available person. He should be not simply officially but really the educational leader of his county. His scholarship should be liberal and

his moral character should be above reproach. It is a disgrace and a burning shame that trustees have sometimes, through partisan or personal influences, placed over the teachers of a county, superintendents defective in scholarship and sadly wanting in moral character. A trustee who would vote for a superintendent on any other ground than that of the greatest efficiency is false to his oath of office, and recreant to his most important official duty.

The superintendents now in office, for the most part, are well qualified and doing a good work. In such cases they should be re-elected. Having learned the details of the office they are worth more to the schools than any other person of equal ability possibly could be for some time to come. On the other hand, if the present incumbent secured his appointment by party favor and not for competency, or has become negligent and careless as to his duties, or has become demoralized as to his moral character (which is the case in a few counties), then the duty of the trustees is plain.

If a superintendent is opposed simply because his standard is high and he insists upon the gradation of the schools, that is a sure sign he should be re-elected. Trustees who are honest and conscientious, and wish to do their duty, can take but one course—they must select the person who will make the best superintendent, without fear or favor, and without regard to party, church, or relationship.

THE INDIANAPOLIS JOURNAL VS. THE PUBLIC SCHOOLS.

The *Indianapolis Daily Journal*, in its issue of April 21, makes another attack upon the public schools. While it embraces every opportunity to get in a criticism on the schools, it has never before been so malignant and unjust. That we may not do injustice we quote the *Journal's* own words—and they come in the form of a leading editorial:—

“A common-school education is proposed to be given to the children of the State of Indiana at public expense. But for years the public schools have been in the hands of doctrinaires, theorists, idealists, who have been experimenting with their pet notions and schemes until the fundamental and constitutional idea of common-school education has been largely lost sight of in cities, especially, which are the habitat of these “advanced thinkers.” In Indianapolis, as a sample, there are hundreds and thousands of children of school age, who can not be and are not accommodated with the school facilities to which they are constitutionally entitled because the funds that should be used to supply these facilities for the whole mass of children are expended in useless and costly ornamentations, added to the school system by educational “cranks,” and thrown away upon such tomfoolery and lawless waste as the teaching of German, forced into the schools by an intolerant spirit, and maintained by a combination of anti-American pride and anti-American demagoguery.

The present condition of things will not always last. The parents of the hundreds and thousands of children who are denied the common school privileges guaranteed by the Constitution will not always consent to see their children grow up in ignorance so that a petted few may "graduate" each year with high-school diplomas tied up in blue ribbon, or a still smaller number be given a small smattering of a foreign language. The fathers of the unschooled children have votes, and they will not be forever content to have the high-school maintained at high pressure, and the German-teaching anomaly continue in full feather, while their sons and daughters grow up in ignorance or idleness, or are given only the most limited and meagre instruction. It will be noticed by them in righteous indignation that it is in the primary and intermediate grades where the doubling, and shifting, and economizing are done, and that even then there is actually no room for a constantly increasing population of school age."

In the first place this is a deliberate insult to every member of a school board and every school superintendent in the state. As every well informed person knows, school boards as a rule are made up of the best citizens—men noted for their business sagacity, their intelligence, and their integrity, and they have it in their power to determine the course of study and all other matters pertaining to the schools. Does the *Journal* intend to apply its epithets "theorists," "idealists," "cranks," etc., to these men? If not, does it mean to apply them to superintendents and teachers? If to the latter, does it not know that the only "useless and costly ornamentation added to the school system by educational cranks," which it names in connection with the lower schools—*German*—was put there, not by the teachers or superintendents, and not even by the school boards, but by the *Journal's* friends the politicians? The law puts it there, and it is unfair to call it "tomfoolery," and thus throw the responsibility upon the "advanced thinkers." In fact the *Journal* knows better than this, for in a recent issue it insists, after investigation, that every teacher in Indianapolis was opposed to the teaching of German in the lower grades of the schools.

The statement that "in Indianapolis there are hundreds and thousands of children of school age who can not be accommodated with school facilities * * because the funds that should be used to supply these facilities * * are expended in useless and costly ornamentations," is absolutely and utterly false, and is a libel alike upon the school officials and the good name of the city. Of course, it is true that hundreds and even thousands of children of school age are not in the public schools; this is true of every large city in the United States, *but not for the reason assigned*. Many people send to private schools and church schools of choice, and many put their children to work in factories, and still more are willing to let their children grow up in ignorance; and thousands of those of school age not in school are such as have spent years in schools and are now out with a fair education, hundreds of these having taken a part or all of the high-school course. The person who takes the school enumeration and compares that with

the actual attendance in school in any one year, and then concludes that the difference represents those growing up in ignorance makes a great mistake.

Instead of "hundreds and thousands" having been shut out of school privileges, the fact is not one has been turned permanently away. In some of the districts some of the grades are full, and it sometimes happens that a child will apply when there is no seat for him. In such cases the teacher takes the name and residence of the pupil, and he is notified as soon as a seat is vacated or provided. In this way some children have been kept out of school a few days, perhaps in some rare cases a few weeks, but in some way all have been cared for who have applied for admission to the schools. No one will deny the *Journal's* right to its opinion that German should not be taught in the public schools, or that the high-school should be abolished, or that any other "useless and costly ornamentations" should be eliminated, but we do contend that it has no right to misrepresent facts; no right to impute to an honorable and intelligent school board idiotic and criminal conduct; and no right to grossly insult the large and respectable body of people that compose the educational profession of this State.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR MARCH.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to legibility (50), regularity of form (30), and neatness (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

READING.—1. What is the object of emphasis? State two ways in which words may be emphasized.

2. Of the objects to be attained in teaching reading, which do you consider the greatest?

3. What steps would you take to prevent children from learning their lessons by heart?

4. Name four American poets and give a quotation from each.

5. (a) Name five juvenile books that can be profitably used in connection with the instruction in geography. (b) Where do you or would you get material for practice of pupils in sight reading?

GEOGRAPHY.—Bound your county; name its county seat and its chief town.

2. Locate Constantinople, Calcutta, Para, Reikavik, Sitka.

3. What is the approximate height of Mont Blanc, Pike's Peak, Mount Washington, Mount St. Elias, Mount Popocatepetl?
4. Describe the "Grand Banks" off Newfoundland, and their chief commercial products.
5. What are prairies? Which are the prairie states?
6. Which of the states of the Union are largely mountainous?
7. What are the countries through which one would pass on a steamboat journey from Basle (in Switzerland) to Rotterdam?
8. Where is Niagara Falls?
9. Describe the physical characteristics of Denmark.
10. Where is the Congo Free State?

U. S. HISTORY.—1. Name and describe briefly the different kinds of colonial governments.

2. What were the Articles of Confederation, and what were their chief defects?

3. Describe briefly the circumstances in U. S. History that gave rise to the following terms: "Nullification," "Ku Klux Klan."

4. Name the two American generals most prominent in the Mexican War, and tell what you can of the subsequent career of each.

5. When and from whom was Alaska purchased? How much was paid for it?

GRAMMAR.—1. This train is running forty miles an hour. State what *forty miles* modifies and how it modifies it.

2. In what ways may possession be indicated? Give examples.

3. In how many ways can it be determined whether the simple relative pronoun expresses one or more than one? Illustrate.

4. How is the case of the compound personal pronouns determined?

5. What classes of verbs can not have the passive voice? Why?

6. How do you know what tense any verb has?

7. For what purpose are adjectives compared?

8. How is the mode of a verb indicated?

9. Analyze the following:

O, ever thus from childhood's hour,
I've seen my fondest hopes decay.

10. Parse *fondest* and *decay* in the above.

SCIENCE OF EDUCATION.—1. State the difference between a sensation and an emotion. Give an example of each.

2. What are some of the important conditions or rules of perfect memory?

3. Which of the common school branches require frequent exercise of the imagination?

4. In studying physiology, to what extent would you use the method of dissection and analysis? Why?

5. Is it possible in school work for the teacher to base whatever he does or requires on reasons, or principles? How are these determined?

6. Why should pupils be required to be prompt and regular in their attendance at school?

7. What effect on education had the introduction of Christianity into the world?

ARITHMETIC.—1. From three and ten thousandths take three ten thousandths.

2. What will it cost to fence a lot with a tight board fence 5 feet

- high at 13 cents a square foot, the lot being 50 by 150 feet? 5, 5.
3. What will a pile of wood cost 100 feet long, 12 feet wide, and 8 feet high, at \$4.50 for every 150 cubic feet? 5, 5.
4. A person paid a debt of \$15.25 in half and quarter dollars, giving 51 pieces altogether; how many of each did he give? Anal. 5, 5.
5. Divide 90 into two such parts that 5 times one part shall equal 4 times the other. Analysis. 5, 5.
6. A, B, C, engage in business; A puts in \$5,000 for 12 months, B \$6,000 for 10 months, C \$7,500 for 8 months; the profits are \$8,700; what is the share of each? 5, 5.
7. A hill contains 1,000,000 cubic yards of earth, another hill of the same shape is twice as high; how much earth does it contain? 5, 5.
8. A National Bank had a capital of \$100,000 invested in U. S. 4% 's at par, a deposit line of \$250,000 upon which it made 6% profit; it sold exchange producing a profit of \$5,000; its expenses were \$12,000; from the net profits it reserved a 2% surplus fund; what dividend could it declare upon its capital? 5, 5.
9. If I buy goods at 20 cents a yard, at what must I mark them to allow a discount of 20%, and yet make a profit of 40%? 5, 5.
10. A window sill is just 40 feet from the ground; how far from the wall of the house must a ladder 50 feet long be placed to reach the sill? 5, 5.

PHYSIOLOGY.—Describe the nervous organization of man, including the cerebro-spinal and sympathetic systems, the organs and parts of each, the functions of each, the different kinds of nervous tissue, and the necessary conditions for the health of the nervous tissues.

ANSWERS TO PRECEDING QUESTIONS.

SCIENCE OF EDUCATION.—1. A sensation is experienced by the soul as connected with an organism, while an emotion is felt without reference to a sensorium. A burn produces a sensation. The news of the death of a friend produces an emotion.

2. "To remember anything, you must attend to it; in order to attend, you must either find or create an interest in the objects to be attended to. This interest must, if possible, be felt in the objects themselves, as directly related to your own wishes, feelings and purposes, and not to some remote end on account of which you desire to make the acquisition."

3. Geography and History.

4. If the circumstances were such as to permit, the vital organs and the eye should be dissected. To reap much benefit from this each pupil should have the opportunity to examine carefully all the parts of these organs. This should be done because a clearer conception of these organs can be gained.

5. Yes. By the nature of the subject and by the nature of the pupil.

6. For two reasons: (1) They accomplish more in school work by being regular; (2) a habit of promptness in everything is formed, which will be of great value in after life.

U. S. HISTORY.—1. There are three different kinds of colonial governments; the colonial governments, the proprietary governments, and the royal governments. The colonial governments were created by written charters from the King, giving the colonists power to elect their own officers, and to a certain extent govern them themselves. The proprietary governments were created by charters from the King to the proprietors who formed the governments according to their own interests; subject, however, at times, to restrictions of the charters—notably in Maryland. The royal governments had no charters, and no chartered rights, but were ruled by Governors appointed by the King, subject only to his own will. Many governments of the first and second kind, by various means were reduced to royal governments.

2. The Articles of Confederation was a plan for a General Government for the Colonies, adopted by the Continental Congress in 1777, ratified by twelve colonies within two years, and by Maryland in 1781. Its articles were very specific. But it was found, as soon as put into force, that its provisions were worthless and ineffective. There was to be one governing body called a Congress, but it was without power to levy taxes, regulate commerce, or punish law breaking. After the most careful and wise consideration of measures it could only advise, while the states could act or not as they deemed best. It could make no provision for the public debt, or even its interest, except through the states. When one state passed laws injurious to others, Congress had no power to object or modify. Foreign commerce was interfered with, and Congress had no power to demand or compel redress. It made the country a people in name but not in fact.

3. When Congress passed tariff laws which South Carolina regarded as not only oppressive, but subversive of the state sovereignty which that state always claimed, the state government threatened secession, but Calhoun, who still held to the Union while he held to the doctrine of state sovereignty, suggested that the state should remain in the Union, but should authoritatively declare that it had never given the Federal Government any authority to pass any protective tariff, and should declare all such laws null and void in the State of South Carolina, and forbid all her citizens from obeying them. This was done by that state but by none others. When the Reconstruction measures for the South were adopted a secret society was originated in the South, at first to keep the freedmen in subjection, then to punish and expel the "carpet baggers" and northern republicans, and finally it drifted into bands of assassins for pay or revenge, when the respectable portion of the southern people arose to disband and disperse them.

4. The two Generals were Zachary Taylor and Winfield Scott. Taylor was born in Virginia, appointed Lieutenant in the Army, rising rapidly to the rank of Major, distinguishing himself in the Black Hawk and Seminole war he was made Major-General. He was sent to take

charge of the American forces in the Mexican war, in which against marvellous odds he gained many victories, often by his peculiar characteristics changing defeat into victory. So strongly was this developed that Santa Anna said, "The old fool never knows when he is whipped." After the war he was nominated for President, when the people thinking he had been badly treated when he was superceded by Scott, elected him. He died, however, before the end of his term. Winfield Scott first became prominent in the war of 1812, when, though a young man he was made second in command to Major-Gen. Brown, in the forces on the Canadian frontier. At that time he translated a work on Tactics, before which our army had no such work. Successful in every engagement, he rapidly rose to the command of the U. S. Army, and was sent to Mexico to supercede Taylor, when, taking the City of Mexico, he brought the war to a successful close with great advantage to this country. He was several times a candidate for nomination to the presidency, and was once a candidate but was defeated. When the Civil War broke out his advanced age prompted him to resign his command, and after a quiet life he died quietly, with the uncommon reputation of having never lost a battle.

5. Alaska was bought by Secretary Seward from Russia in 1867, for \$7,200,000.

PHYSIOLOGY.—1. The nervous organization of man consists of two parts—the Cerebro-Spinal System and the Sympathetic System. The former is composed of the brain (large and small), the cerebral ganglia, the pons, medulla, and spinal chord, and the cerebral and spinal nerves ramifying through the head and body. The special functions of these portions are, to think, to regulate the motor and locomotor organs, to inform the thinking and directing center of the physiological condition of the organs and tissues of the body, and also to make the internal world of thought acquainted with the external world of matter.

The Sympathetic Nervous System consists of two chains of nervous matter, with twenty-four ganglia upon each, beginning at the base of the brain and terminating in a forty-ninth ganglia in front of the coccyx. Connecting fibers unite this system with the Cerebro-Spinal System both within the skull and at various points in the trunk. Important plexuses pass from this system and send fibers to the chief internal organs of the body. The special function of this system seems to be to more closely connect the more important organs and tissues with each other and with the brain, so that no one may be seriously impaired without calling the others into sympathy with it, and thus affording better protection to the body as a whole.

No one can study closely the nervous organization of man without being struck by the wisdom of Him who created so wonderfully complex and yet so harmonious a piece of mechanism.

READING.—1. The purpose of emphasis is to bring out more fully the meaning of a word, a phrase, or a sentence. This may be done by a change in the tone of voice, by elevating or lowering the voice, etc.

2. The greatest object to be accomplished in teaching Reading is believed to be the ability quickly and accurately to interpret the thought and sentiment of the printed or written page.

3. To prevent children from learning their lessons by heart, they must not be so questioned as to lead them to think this process meets the teacher's demands. On the contrary, the questions of the teacher must demand thought on the part of the pupil in order to meet them and stand his tests.

4. Four American poets with a quotation from each:—

H. W. Longfellow—"Learn to labor and to wait."

W. C. Bryant—"Peace to the just man's memory—let it grow
Green with years, and blossom thro' the flight
Of ages."

Alice Cary—"True worth is in BEING, not SEEMING;
In doing each day that goes by
Some little good—not in the dreaming
Of great things to do by and by."

J. G. Whittier—"I know not where God's islands lift
Their fronded palms in air;
I only know I can not drift
Beyond His love and care."

5. a. "Zigzag Journeys" (2); Knox's "Boy Travelers" (3); "Views Afoot through Europe" (Taylor); Du Chaillu's "Wild Life under the Equator"; "Wanderings in South America" (Waterton.) (These books are for the Grammar Grade.)

b. E. O. Vaile, of Chicago, publishes a good line of cheap works for this purpose; also S. R. Winchell & Co., of Chicago. It is well, also, to have a number of Readers of the same grade but by different publishers on hand.

ARITHMETIC.—1. $3.010 - .0003 = 3.0097$. Ans.

2. Girth = 400 feet. 400×5 sq. ft. = 2000 sq. ft. 2000 sq. ft. at 13¢ per sq. ft. = \$260. Ans.

3. $100 \text{ ft.} \times 12 \text{ ft.} \times 8 \text{ ft.} \times \$4.50 = \$288$. Ans.
150 cu. ft.

4. If I pay it all in quarters, it will take 61 pieces, which is 10 pieces too many. I must, then, use half-dollars enough to reduce the number of pieces ten. One half-dollar will reduce the number one, therefore ten must be used to reduce the number of pieces ten. We must therefore take ten 50-cent pieces and forty-one 25-cent pieces.

5. If $5 \times$ one part = $4 \times$ the other, one time first part = $\frac{1}{5}$ of 4, or $\frac{4}{5}$ of the other; $\frac{4}{5}$, one part, + $\frac{4}{5}$, the other, = 90. $\frac{4}{5} = 90$; $\frac{1}{5}$ of number = $\frac{1}{5}$ of 90, or 10; $\frac{4}{5}$, or one part, is $5 \times 10 = 50$; $\frac{4}{5}$ is $4 \times 10 = 40$. Ans. $\frac{4}{5}$.

6. $\$5000 \times 12 \text{ mo.} = \60000 for 1 mo., A's.

$\$6000 \times 10 \text{ mo.} = \60000 for 1 mo., B's.

$\$7000 \times 8 \text{ mo.} = \56000 for 1 mo., C's.

$\frac{1}{11}$ of \$3700, gain = \$126 $\frac{1}{11}$, A's; $\frac{1}{11}$ = \$126 $\frac{1}{11}$, B's; $\frac{1}{11}$ = \$117 $\frac{1}{11}$, C's.

7. $1^3 : 2^3 :: 1000000 \text{ cu. yd.} : 8000000 \text{ cu. yd.}$ Ans.
8. 4% of $\$100000 = \4000 , gain on U. S. bonds.
 6% of $\$250000 = \15000 , gain on deposits.
 $\$4000 + \$15000 + \$5000 = \24000 , total gain.
 $\$24000 - \$12000 = \$12000$, net gain.
 $\$12000 \div \$350000 = 3\frac{3}{5}\%$, rate of dividend, if no surplus were allowed.
 $3\frac{3}{5}\% - 2\%$, surplus $= 1\frac{3}{5}\%$, rate. Ans., $1\frac{3}{5}\%$, rate of dividend.
9. 40% of 20ϕ , cost $= 8\phi$, gain.
 20ϕ , cost $+ 8\phi$, gain $= 28\phi$, selling price.
 28ϕ is 80% , or $\frac{4}{5}$, of asking price.
 $\frac{1}{5}$ of asking price $= \frac{1}{4}$ of 28ϕ , or 7ϕ .
 $\frac{5}{4}$, or asking price $= 5 \times 7\phi$, which is 35ϕ . 35ϕ , Ans.
10. $\sqrt{50^2 - 40^2} = 30 \text{ ft.}$ Ans.

GEOGRAPHY.—2. Constantinople is situated in the southeastern part of Turkey, on the Strait of Bosphorus. Calcutta is situated on the Hoogly River, eighty miles from the Bay of Bengal. Para is in the northeastern part of Brazil, on the Para River. Reikavik is situated on the southwestern coast of Iceland. Sitka is situated on Sitka Island, in the southeastern portion of Alaska.

3. The height of Mont Blanc is 15,784 feet; of Pike's Peak, 14,147 feet; of Mount Washington, 6,293 feet; of Mount St. Elias, 17,900 feet; of Mount Popocatepetl, 17,720 feet.

4. The name "Grand Banks" is given to the outer coast of Newfoundland and the shallow places in the neighboring sea. It is the resort of myriads of cod fish, and is said to be the best fishing ground in the world. Nine-tenths of the inhabitants of Newfoundland are said to be directly or indirectly engaged in the cod, seal, herring, and salmon fisheries, which form the chief commercial products of the island.

5. Prairies are extensive tracts of land, treeless, and usually fertile and covered with coarse grass. They are either level or rolling. In the United States they include Illinois and Iowa, the southern part of Michigan, the northern part of Missouri, and large portions of Wisconsin, Minnesota, Kansas and Nebraska. About one-eighth of Indiana is prairie.

6. New Hampshire, Pennsylvania, Virginia, Colorado, Nevada, California, and Oregon are largely mountainous; also portions of West Virginia, Kentucky, Tennessee, North Carolina and Missouri.

7. Through the German Empire and Holland.

8. Niagara Falls are in the Niagara River, about half way between Lake Erie and Lake Ontario.

9. Denmark includes the low, sandy northern half of the peninsula of Jutland, together with the adjacent islands at the entrance of the Baltic Sea. The climate is moist. Minerals and forests are wanting; the only fertile land is on the islands, and the soil is chiefly adapted to stock raising.

10. Congo Free State is situated in central equatorial Africa, its northern boundary being the Congo River.

GRAMMAR.—1. *Forty miles* modifies the verb *is running*. It is an adverbial phrase expressing distance or rate.

2. The relation of possession may be indicated, (1) by the possessive sign; as, *John's hat*: (2) by the use of the word *of*, or the phrase *belonging to*, or *property of*; as, *The works of Milton*; *The property of Mr. Smith*: (3) by a change in form; as, *Wolsey, whose career ended in disgrace*.

3. (1) By reference to its antecedent; as, "Poor boys, *who* have become famous," in which the antecedent *boys* shows that the relative *who* is plural. (2) When the antecedent is omitted, as in the sentence, "Who steals my purse steals trash," the verb *steals* shows that its subject *who* is singular.

4. By their use in the sentence.

5. All intransitive verbs, whether they express mere *being* or *state* or an *action which does not pass over to a receiver*; because, in these cases, the thought does not employ any sufferer or receiver of an action.

6. If it is one of the principal parts, by its form; otherwise by its auxiliary tense sign.

7. For the purpose of expressing different degrees of the same quality.

8. The mode of the verb is indicated by the manner in which the assertion is made; and sometimes by a modal sign.

9. This is a simple declarative sentence, introduced by the interjection, *O*. The subject is the pronoun *I*. "*Ever thus, from childhood's hour, (have) seen my fondest hopes decay,*" is the entire predicate. *Have seen* is the pred. verb, having *hopes* for its object complement. *Hopes* is modified by the possessive *my*, and the adjective *fondest*, and the infinitive *decay*. "*Ever thus,*" and "*From childhood's hour,*" are adverbial phrases modifying "*Have seen my fondest hopes decay.*"

10. *Fondest* is a qualifying adjective, in the superlative degree, modifying the noun *hopes*. *Decay* is an infinitive, with the sign *to* omitted, and is used adjectively to modify the noun *hopes*.

Books are the true levelers. They give to all who faithfully use them, the society, the spiritual presence of the best and greatest of our race.—*Channing*.

The greatest pleasure I know is to do a good action by stealth, and have it found out by accident.—*Lamb*.

READING CIRCLE DEPARTMENT.

OUTLINES FOR MAY.

HAILMAN'S LECTURES ON EDUCATION—LECTURE IX.

Pestalozzi is the theme of the ninth and tenth lectures. The ninth is devoted to the biographical aspect of the great school-reformer. His life is well worthy of study by Americans. He is the living exemplification of qualities which are antipodal to those commonly attributed to our countrymen. His unselfishness, his devotion to ideal ends and aims, and his struggle to benefit humanity are eminently worthy of study and imitation. Teachers will find much in Pestalozzi's life to encourage perseverance and to give comfort when they are overwhelmed with the consciousness of their failures and their inabilities.

Pestalozzi unites some queer qualities of mind. He was a dreamer, rather than a man of action. His mind was singularly deficient in the power of prevision or calculation. Impulse was the prevailing emotional form. And yet, he had great persistency of purpose, or rather, should we not say, great persistency in following his ideals! Quick tells this anecdote to illustrate his impulsiveness: At one time he was in great pecuniary distress, and his family were without the necessities of life. Under this stress, he went to a friend's house and borrowed a sum of money. On his way home, he fell in with a peasant who was lamenting the loss of a cow. Carried away as usual by his feelings, Pestalozzi gave the man all the money he had borrowed, and ran away to escape his thanks. He had the good qualities of impulsive people who lack self-center and who do not wait on their second thought. At school, he was called Harry Oddity of Foolboroug. But when the pupils were frightened out of the house by an earthquake, he was the only boy who had courage to go back and get the caps and books. .

The simplicity and self-forgetfulness of the man are, in this age of egotism, self-seeking, and sham, what an ocean breeze is to a parched and thirsty traveler. Prof. Painter has a story which illustrates finely these qualities in Pestalozzi. "A poor young man had traveled on foot a long distance to pay his tribute of respect and admiration to Pestalozzi; but, upon arriving at Yverdun, he found himself so reduced that he could not pay for a night's lodging at the hotel. Pestalozzi, not wishing to disturb the household, offered his own bed to the wearied guest. Some friends, calling at his room soon after, were astonished to see his bed occupied by a stranger. Alarmed at his absence they went in search of him, and found him at last stretched on one of the hard benches of the school-room in sound sleep, and totally unconscious that he had done anything but his duty."

That Pestalozzi was entirely religious is well shown by his many deeds of religious life, but by nothing more pointedly than his utterances at Yverdun, when he stood by the coffin of his wife, who had been his sympathizer and co-worker for nearly fifty years. * At the burial, Pestalozzi, turning to the coffin, said with great tenderness: "We were shunned and despised by all; sickness and poverty bowed us down, and we ate dry bread with tears. What was it that in those days of severe trial gave you and me strength to persevere and not lose hope?" Then laying a Bible on the breast of the departed, he continued: "From this source you and I drew courage and strength and peace."

Compayre summarizes Pestalozzi's style as a writer thus: "The style is the man himself: desultory, obscure, confused, but with sudden flashes and brilliant illuminations in which the warmth of his heart is exhibited. There are also too many comparisons; the imagery overwhelms the idea. Within a few pages he will compare himself, in succession, to a sailor, who, having lost his harpoon, would try to catch a whale with a hook, to depict the proportion between his resources and his purposes; then to a straw, which even a cat would not lay hold of, to tell how he was despised; to an owl, to express his isolation; to a reed, to indicate his feebleness; to a mouse, which fears a cat, to characterize his timidity."

After examining various characterizations of Pestalozzi, it has seemed to the writer that that of Compayre is best: it is therefore given.

"There appeared, towards the end of the eighteenth century, the most celebrated of modern educators, a man who, we may be sure, was not exempt from faults, whose mind had deficiencies and weaknesses, and whom we have no intention of shielding from criticism, by covering him with the praises of a superstitious admiration; but who is preeminently great by reason of his unquenchable love for the people, his ardent self-sacrifice, and his pedagogic instinct. During the eighty years of his troubled life, Pestalozzi never ceased to work for children, and to devote himself to their instruction. War or the ill-will of his countrymen destroyed his schools to no purpose. Without ever despairing, he straightway rebuilt them farther away, sometimes succeeding, through the gift of ardent speech, which never deserted him, in communicating the inspiration to those about him; gathering up in all places orphans and vagabonds, like a kidnapper of a new species; forgetting that he was poor, when he saw an occasion to be charitable, and that he was ill, when it was necessary to teach; and, finally, pursuing with an unconquerable energy, through hindrances and obstacles of every description, his educational apostleship. 'It is death or success!' he wrote. 'My zeal to accomplish the dream of my life would have carried me through air or through fire, no matter how, to the highest peak of the Alps!'"†

S. S. PARR.

* Painter's History of Education.

† Payne's Translation.

HISTORY.

Green's Shorter History of the English People—pp 613-706.

POINTS OF SPECIAL INTEREST—*a.* Relation of England to the Dutch during the Stuart reign; *b.* The Great Plague of 1665 and the Great Fire of 1666; *c.* *Intent and cause* of the Rye-House Plot; *d.* Origin of the term Whig and Tory as used in the reign of the Stuarts; *e.* *Cause* of the dethronement of James II; *f.* *Causes* which led to the choice of William of Orange; *g.* The Tripple (Grand) Alliance; *h.* Study carefully the characters of the Duke of Marlborough and Walpole; *i.* Who was Titus Oats?

STATEMENTS.—1. "In the year 1679 was passed the famous Habeas Corpus Act, entitling every prisoner to speedy trial, and thus preventing arbitrary imprisonments."

2. "The reign of Charles II was a great era in science. Newton discovered the law of gravitation; Boyle investigated the properties of the atmosphere; Hobbs and Locke discoursed of the human mind, its laws and relations to matter."

3. "William of Orange was the leader of Protestant Europe against Louis XIV, as Elizabeth had been against Philip of Spain."

4. "The reign of James I is marked as an era of colonization. The North of Ireland, desolated by Tyrone's rebellion, became the home of thousands of industrious settlers from Scotland. The East India Company's charter was renewed and its first factory planted at Surat in 1612. Two associations, known respectively as the London and Plymouth Company, were chartered in 1606, for planting and ruling New England in America."

5. "The reign of Queen Anne is noted for the "War of the Spanish Succession." Besides the brilliant military achievements which characterize this reign, it is also characterized for the great progress in science and literature; it is called the Augustan Age of England. In this reign also, in 1707, England and Scotland formed a constitutional union. Although these two countries had acknowledged one sovereign since the reign of James I, they had until 1707 held separate legislatures."

6. "Anne's death marked the last of the Stuart line; she left no children, and George I, the son of the Duke of Brunswick, Elector of Hanover, and of Sophia, grand-daughter of James I, became King, thus establishing the *House of Brunswick*, up to the English throne."

7. "George I was a foreigner with alien views and motives, with no sympathy with the English people, and too old to imbibe them or assimilate them; hence he was never loved by the English."

8. "The South Sea scheme, originated in the reign of George I, was the project of a corporation called the South Sea Company, to pay off England's national debt by carrying on mercantile enterprises with the Spaniards in South America." *The debt was not paid off.*

9. "George II succeeded his father at the age of 45; his reign is characterized by trouble with Spain in regard to the boundary of the Oglethorpe colony in America, and by the English supporting the claims of Maria Theresa, which involved it in a war with France."

10. It may be interesting to note that during the reign of George II was fought the famous battle of *Culloden*. This battle was conducted by Charles the Pretender, grand-son of James II on one side and the Duke of Cumberland on the other. "This was the *last battle* fought on the soil of Great Britain, and closed the struggle made by the Stuarts to regain the English throne."

NOTE.—The work of the course in English History closes with this month. Those who have become interested in the work can, of course, pursue it further at their leisure; and I know of nothing that will open up a more wonderful or more beautiful field for thought, or that can furnish an ampler scope for culture.

The coming examination in History will be *confined strictly to the work as given in the Outlines in the Journal, and no question will be asked, the answer of which is not definitely stated in the text of the work used by the teachers. The questions will be such as are designed to test the teacher's knowledge of the general growth of the civil, political and religious thought of the English people.* MATTIE CURL DENNIS.

MENTAL SCIENCE—WATTS ON THE MIND.

SUBJECT: "Of Instruction and Authority."—Pages 175-200.

I. ITEMS OF PROFESSIONAL IMPORTANCE.

1. Perspicuity of Expression:

- (a) "Whatever attention the hearer or reader is obliged to give to the words or arrangement in order to take in their meaning is so much deducted from the force of the sentence."—*Hart*.
- (b) "That form of expression is most excellent which yields its contained idea with the least expenditure of mental power."—*Spencer*.

2. Familiarity with one's language; the possession of a large vocabulary:

- (a) The following rules are summarized by David J. Hill, touching the acquisition of, and familiarity with, a large vocabulary:
 - 1. Always note a new word.
 - 2. Make constant use of a dictionary.
 - 3. Study Etymology. (The little book by C. S. Halsey—*Latin and Greek Etymology*—is a good one.
 - 4. Seek good society.
 - 5. Read the best books carefully.

To which should be added the complement of all these:

Under all circumstances use the best language you know.

3. Frankness and absence of dogmatism.
4. An obliging address.
5. Non-insistence upon the form of truth.
6. Nature of authority.
7. Treatment of prejudices.

- II. SUMMARIES.
1. The errors of style.
 2. Rules for attaining clearness in expression.
 3. Rules for convincing others of truth.
 4. Examples of the legitimate exercise of authority.
 5. Means of overcoming prejudices.

III. QUOTATIONS FROM WATTS.

1. "It would be well if quacks alone had a patent for pedantic language."
2. "We learn the style with which we are very conversant and practice it with ease."
3. "Truth comes with particular force from the mouth of one whom we trust."
4. "The passions never clear the understanding."
5. "Men (much more children) can not believe what they will, nor change their religion and their sentiments as they please."
6. "There is nothing which shows more dexterity of address than this secret influence over the minds of others, which they do not discern even while they follow it."
7. "No human authority has certain and undoubted claim to truth; nor is it any violation of good manners to enter a caveat, with due decency, against its pretended dominion."

R. G. BOONE.

READING CIRCLE NOTES.

Quite an enthusiastic, as well as most profitable meeting was held at Madison during the sessions of the Southern Indiana Teachers' Association, in the interests of the Reading Circle. The large parlor of the "Madison Hotel" was full. Institute workers, county superintendents, college men, city superintendents, and editor W. A. Bell all participated. Reports were made showing nearly 3,000 Green's Histories sold to Indiana teachers, and about the same number of each of the other books. Besides these many teachers are reported doing the work of the preceding years—some for 1884-5, some for 1885-6. Only about one-third of all these have paid anything toward the organization, or reported in any way as members.

It is encouraging to know that one-fourth of Indiana's teachers are reading the course; it would be more satisfactory to know that this one-fourth were willing to pay the small sum required (asked) to become members. The total cost, including books and annual fee, to members of Indiana Circle is about one-half what it is in either the National Teachers' organization, or the Chautauqua Teachers' Circle,

and but one-third what it costs a member of the Chautauqua Literary and Scientific Circle. These are worth all they cost, and considering that two of these have largely adopted the Indiana plan and more or less of the course, and that half the State Circles organized have done the same, it would seem the Indiana Circle is worthy of a very liberal patronage.

THE outlines for "Watts on the Mind" close the book this month. June is left to members for a review. There will also, by this arrangement, be afforded an opportunity to those who have not read the book regularly, to bring it up now and be ready for the June examination.

It is urged, therefore, again, that all teachers who can possibly do so, complete their membership through the county manager, take the examination the third Saturday in June, and so get credit for the work done. The following includes all the work done in the three years just closing:

Brooks' Mental Science, to page 319.	} First year's work.
Barnes' General History, to page 337.	
Parker's Talks on Teaching, complete.	
Brooks' Mental Science, from page 319.	} Second year's work.
Barnes' General History, from page 337.	
Smith's English Literature, complete.	
Hewett's Pedagogy, complete.	
Watts on the Mind, complete.	} Third year's work.
Hailman's Lectures, complete.	
Green's Short History, to page 706.	

Provision will be made so that *any applicant may be examined on any one or all of these ten subjects*. Credit will then be given for so much work done; and when the equivalent of four year's reading has been completed a diploma will be given whether the work has been taken regularly or not.

TO BE entitled to take the examination, the membership fee as well as the examination fee should be paid (or have been paid) to the county manager.

IT is believed that Green's History has proved one of the most popular books of the year's course. Sullivan county has used 125 copies: Henry, 100 copies; Marion, 117; Hancock, 120; Hamilton, 102; and eleven other counties average but little less.

EDITOR JOURNAL:—You ask suggestions or discussion with reference to Reading Circle work. I believe all agree that the work of the Circle, if faithfully done, will result in much good to teachers, and a corresponding benefit to the profession. But all are not doing the work; and many will continue indifferent till the proper authority *requires* it to be done as a necessary qualification to teach. When this requirement is made *all* will enter upon it earnestly. My experience is that the work assigned for each year, so far, has been too heavy.

Not more than two subjects can be handled well in the majority of local circles, during the school year. As well may the surgeon be ignorant of anatomy, as the teacher unfamiliar with the truths of psychology.

Respectfully,

JOHN R. WEATHERS.

New Albany.

MISCELLANY.

SOUTH WHITLEY is erecting a \$10,000 school house.

LOUIS MORGAN will open an 8-week normal at Carthage, May 2d.

W. F. L. SANDERS will open an 8-week normal at Cambridge City, June 6th.

THE NORTH MANCHESTER schools are doing good work under the direction of Henry Gunder.

A SPRING NORMAL will be opened at La Gro May 9, and continue 7 weeks, H. F. Wilkie, principal.

THE STATE NORMAL SCHOOL is *full*, and things running smoothly. The work is up to the original high standard.

THE Spring Term at Union Christian College, at Merom, is fuller than usual, and the order and interest are excellent.

THE PUBLISHERS' COMMERCIAL UNION has removed its headquarters from Janesville, Wis., to 69 Dearborn street, Chicago.

FROM the Southern Ind. Normal at Mitchell word comes, "we have never had so fine a prospect for a full school as this spring."

PHILMER DAY, Chas. N. Peak, and A. R. Beach will open a summer normal at New Marion, beginning July 11 and continuing 8 weeks.

THE entering class at De Pauw Normal this spring is larger than for last year, and the quality is excellent. This school is doing excellent work.

THE AMERICAN NORMAL, at Logansport, began its present term by enrolling 343 the first day, and many have been added since. This is certainly a good showing.

THE STATE UNIVERSITY was never before in so prosperous a condition. The attendance is larger and the work is enthusiastic both on the part of the instructors and the teachers.

"A HOOSIER SCHOOL MARM," who some time ago sent some verses for publication in the Journal, expresses some good thoughts, but she needs to familiarize herself with the laws of versification before her poetry will bear public criticism.

J. L. CRAIG, who for the last 20 years has been engaged in school work in Indiana and West Virginia, will open a normal at Poseyville on April 25, to continue 10 weeks. Mr. Edwin S. Monroe, principal of the Farmersville schools, will assist in the work.

THE season of high school commencements is now here and numerous notices are being received at this office. We are glad to see the notices and receive the programs, but can not find space to make notice of them in the Journal. Some of the programs received are works of art.

THE SOUTHERN INDIANA ASSOCIATION, an account of which will be found on another page, was one of the largest and best ever held. Supt. J. H. Martin, as chairman of the executive committee, had arranged everything admirably, and Pres. E. A. Bryan made an excellent presiding officer.

"If an *S* and an *i* and a *o* and a *u*, with an *x* at the end, spell "*Su*,"
And an *e* and a *y* and an *e* spell "*i*," what is a speller to do?
Then if also an *s* and an *i* and a *g* and an *h-e-d* spell "*cide*,"
There's nothing much left for a speller to do but go and commit
Siouxeyesighed."

PURDUE UNIVERSITY was left in worse financial condition than any of the other educational institutions, by the failure of the legislature to make necessary appropriations, but Pres. Smart reports that arrangements have about been completed for all necessary funds, and that the school will go on as usual.

RENSSELAER.—The schools are full and prospering. The high school will graduate 8. The high school pupils recently gave an entertainment for the benefit of the library fund and cleared \$222.28. The library, which was begun last year, already contains 500 volumes. Supt. F. W. Reubelt deserves much credit.

A NEW DEPARTMENT.—In the next issue of the Journal will be opened a new department. It will be called "Queries and Answers," and will be conducted by J. C. Gregg, Supt. of the Brazil schools. There is certainly a demand for this department, and if the "queries" are confined to topics of practical import and general interest, it can be made very helpful. All matter intended for this department should be directed to Mr. Gregg at Brazil.

PROBLEM AND SOLUTION.—*Ed. Journal*: In the last (April) number of the Journal, I notice solution is asked for the following problem: "In digging a cellar, the length of which was 6 times, and the width 4 times its depth, 192 cubic yards of earth were removed; what were the dimensions of the cellar?"

Solution: 1 time the depth=the depth.
6 times the depth=the length.
4 times the depth=the width.

Multiplying these dimensions together we have, 24 times the cube of the depth=solid contents. But 192 cu. yd.=solid contents. Then 24 times the cube of the depth=192 cu. yd., and 1 time the cube of depth= $\frac{1}{24}$ of 192, or 8 cu. yd., and 1 time the depth= $\sqrt[3]{8}$ cubic feet, or 2 feet.

JOHN R. WEATHERS.

OBJECTS.—Mr. Gregg objects to Mr. Blodgett's criticism. He says: "My solution is correct in every particular, and is one I have never given before. There is absolutely no sense in Mr. Blodgett's criticism as printed in the Journal. He says:

A's $\$295,327 \times (6\% \times 7) = \$124,037$;
B's $\$331,830 \times (6\% \times 7) = \$99,549$;
C's $\$372,843 \times (6\% \times 7) = \$67,112$.

That is to say, the interest of \$295 for a certain time, and at a certain rate, is *more than the interest of* \$372 for the same time and at the same rate! The correct proof is as follows:

A's $\$295,327 \times (1.06)^7 = \$444,063$ }
B's $\$331,830 \times (1.06)^5 = \$444,063$ } As it should be
C's $\$372,843 \times (1.06)^3 = \$444,063$ }

Brazil, Ind.

JOHN C. GREGG.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

The tenth annual meeting of this Association met in Trinity M. E. Church, Madison, March 23, at 7:30 P. M. The exercises were opened with prayer by Rev. Barnard, of First Presbyterian Church. The address of welcome was delivered by Mr. M. C. Garber. He spoke in glowing terms of Indiana's school system and the men and women it had produced.

Pres. E. A. Bryan, of Vincennes University, made an appropriate response, and then delivered his inaugural address. His subject was "Limitation." It was full of good points.

THURSDAY.—The exercises were opened with prayer by Rev. Brown, of Second Presbyterian Church. Prof. R. G. Boone, of Indiana University, presented a paper on "National *vs.* State Reading Circles." Discussed by R. A. Ogg of New Albany high school, and W. A. Bell of the School Journal. The paper and discussions strongly favored State Circles.

Paper by J. A. Carnagey, of Madison high school. Subject: "Is it the Function of the Teacher to Instruct, to Educate, or to Train?" Discussed by Prof. Boone.

Pres. D. W. Fisher, of Hanover College, gave an excellent address upon "The Influence of Christianity on Education." The clergy present endorsed the sentiment of the address.

W. H. Rucker, of Lawrenceburg high school, presented a paper on "What the People have a right to Expect from the Public Schools." Discussed by Messrs. Bell, Funk, and Williams. The paper and discussions had much to say upon that oft spoken of, but poorly defined word—practical.

"Reading *vs.* Elocution in the Public Schools," presented by Prof. Joseph Carhart, of De Pauw University. He said the public schools exist not to make dramatic performers, orators, etc., but to give pupils a mastery over words and skill in the proper expression of ideas. Supt. Graham, of Columbus, thought we should have a standard for teaching reading and work to it.

"The Limits of the Graded School Course." Discussed by Supts. Stevenson of Rising Sun, and McCormick of New Harmony. These papers were earnest and convincing arguments in behalf of High Schools.

Thursday evening Prof. C. H. Hall, of Franklin College, lectured. Subject: "The End of Education." He said education should make truth seekers, truth possessors, and worshipers of the God of Truth. Truth was defined as the agreement of our ideas with external things.

FRIDAY.—Exercises opened with prayer by Rev. Philmer Day, of Osgood. The first paper, "The Teacher in the Social Relation," was read by Mrs. Alice Bridgman, Prin. Salem high school. Discussed by Prin. Day, of Osgood.

"Should the Rules of Civil Service Reform Prevail in the Selection of School Officers and Teachers?" was presented by Prof. Howard Sandison, of the State Normal. This was an account of Prof. Sandison's observations while in Italy. It was a learned discussion of the relation of officials in general and school officials in particular to the government. Mr. Ballard, of Ohio, made a few remarks favoring Civil Service Reform in school matters.

Miss F. C. Simpson, of the Jeffersonville high school, presented a

method for securing and managing School Libraries that was full of practical suggestions.

The following letter was received from Dr. Owen, of New Harmony:
 "NEW HARMONY, IND., March 23, 1887.

To the Officers and Members of the S. I. T. Association :

It has been suggested by the Superintendent of our Graded Schools at New Harmony (where over fifty years since I commenced my humble labors as a teacher) that a few lines from a veteran co-laborer might be acceptable. I, therefore, write to offer you my friendliest greeting and most cordial good wishes for a pleasant and profitable session.

The hope, the very life of our Republic, depends upon the virtue and intelligence of her citizens; and these center in education from the lowest to the highest grade.

The teacher is neither remunerated nor appreciated as that highly important profession deserves and demands: but there are other rewards for the conscientious performance of the high and responsible duty. That Indiana and Indiana Teachers may ever be found leading in the foremost ranks of an imperishable educational phalanx, is the earnest and cordial wish of

Yours Fraternally,

RICHARD OWEN."

The Association, through a committee, prepared the following response to Dr. Owen's letter:

"The teachers of Southern Indiana in Association assembled, have heard with great pleasure the greeting of Dr. Richard Owen, so kindly sent, and desire, through a committee selected, to give expression to their high appreciation of the character of the sender.

To some this appreciation is that which comes from knowing of the work done by Dr. Owen, an inspiration to them in subsequent years.

Remembering these things, we take this occasion to express our high recognition of the teacher, the scholar, and the man, and to express the wish that added years of useful and happy living may yet be before our honored friend.

R. A. OGG,

A. H. GRAHAM,

Committee."

Columbus was selected as the place for the next meeting.

The Committee on Nominations reported the following ticket for officers for the next year:

President—J. H. Martin, Madison.

Vice-Presidents— $\left\{ \begin{array}{l} \text{Mrs. Alice Bridgman, Salem.} \\ \text{James Baldwin, Greencastle.} \end{array} \right.$

Secretary—Miss C. L. Boark, Jeffersonville.

Treasurer—J. P. Funk, Corydon.

Executive Committee— $\left\{ \begin{array}{l} \text{A. H. Graham, Columbus.} \\ \text{F. D. Churchill, Aurora.} \\ \text{Amos Sanders, North Vernon.} \\ \text{Miss Margaret McCalla, Bloomington.} \\ \text{H. D. Voris, Franklin.} \end{array} \right.$

Report adopted by the Association.

On Thursday the faculty of Hanover College invited the Association to visit the college. The Association returned thanks for the invitation, and many accepted it.

The attendance of teachers was large, and we were glad to see the large number of citizens in attendance at each session.

Most excellent music was furnished throughout the meeting by a quartet of well trained singers.

I. M. BRIDGMAN, *Secretary.*

PERSONAL.

G. M. Naber will teach in the Fort Wayne College during the spring term.

J. V. Martin, Supt. of the Greenfield schools, has been re-elected for next year.

A. N. Crecraft, Supt. of Franklin county, has been having a tussel with a case of measles.

J. T. Engle is conducting a spring normal at Lexington, where he is serving his third year.

W. W. Parsons, Pres. of the State Normal School, is the President-elect of the State College Association.

Milton Hershberger, now of Ireland, Dubois county, has had his license revoked by the County Supt. because of immoral conduct.

E. W. Wright has been re-elected Superintendent of the Kendallville schools at a salary of \$1200. His administration is heartily endorsed.

Jasper Goodykoontz has been appointed one of the teachers in the State Normal School at Jacksonville, Ala. He is a graduate of Indiana Normal School.

Thos. Charles, a former well known Indiana educator, as will be seen by his advertisement, has removed his little wheel-barrow to a more convenient location.

Mrs. Mary C. Dillon, *nee* Duddleson, one of Marshall county's oldest and best teachers, recently passed from labor to reward, and is much lamented by her many friends.

S. S. Parr, Prin. of De Pauw Normal, is expecting to go to Europe at the close of this school year, and spend six months or more in studying the schools of the "Old World."

Miss F. C. Simpson, Principal of the high school at Jeffersonville, has accepted a position in a private school in Louisville, Ky., at a higher salary than Jeffersonville will pay her. In Miss Simpson Indiana loses a teacher of superior ability.

S. N. Cragen, a student at West Point two years, has been elected Superintendent of Boone county to succeed H. M. La Follette, elected State Supt. Mr. Cragen is well recommended, and confidence is expressed that he will make a good officer.

W. F. Harper, founder of the Central Normal School at Danville, has for several years past been pastor of the First Baptist Church at Wichita, Kan. He was recently elected President of a richly endowed college the Baptists are building in Wichita.

Caleb S. Bragg, of the well known firm of Van Antwerp, Bragg & Co., has been in ill health for some months past, and that he may get the much needed rest he will sail for Europe on the 14th inst. The Journal wishes him a pleasant trip and a complete restoration to health.

Lewis H. Jones has been unanimously elected Supt. of the Indianapolis schools for another year. Mr. Jones has the schools in excellent condition, and could do still better were it not for the fact that his board is much cramped for money, owing to the special law limiting taxation.

Mrs. Kate Brearley Ford, of Detroit, Mich., well known to teachers in many of our counties, is the author of an elaborate essay on "The Practical Education of our Daughters," which will soon appear in a new book of self-instruction and culture, to be issued by a subscription house in Detroit.

G. W. A. Luckey, Supt. of the Decatur schools, will resign his place at the close of the school year, and, with his wife, will devote some years to come in advanced study. He leaves the schools in most excellent condition and the board regrets to have him go. His wife also is an experienced teacher. Their places will be hard to fill.

Capt. Henry A. Ford, formerly of South Bend, now of Detroit, Mich., has completed a thorough revision and extension to the present year of the old German-American chart of history entitled, "The Stream of Time." It has been beautifully engraved by Matthews, Northrop & Co., of Buffalo, and will shortly be published by F. B. Dickerson & Co., a Detroit firm.

OBITUARY.

The Journal with great regret announces the death of HAMILTON S. MCRAE, Supt. of the Marion schools. He died of decay of the blood, April 26. For many years he has been recognized as one of the leading superintendents of the state, and as he never missed a State Association, his circle of acquaintance was large. He was a man of sterling merit and generous impulses, and will be mourned by a large circle of friends. The following is a brief sketch of his life:

He was born in Harrison county, Ind., Jan. 2, 1833. He attended Friendship Seminary, at Elizabeth; graduated from the State University in 1857, delivering the valedictory; studied law under Hon. Wm. A. Proctor, of Corydon, and was elected district attorney of the Common Pleas Court, and was elected to the Legislature in 1861 to fill a vacancy. He joined Company B, 69th Indiana Infantry, as a private, Aug. 11, 1862, and was mustered out as a captain May 31, 1865. Was appointed principal of the Third-ward schools of Terre Haute in 1865; became superintendent of the Vevay schools, and school examiner of Switzerland county in 1866; was elected superintendent of the Muncie schools in 1867, which position he held for 16 years, and went to Marion in the same capacity four years ago. He was a member of the Beta Theta Pi fraternity and of the Grand Army of the Republic. He was also a member of the Indiana State Teachers' Association, the American Metric Bureau, the National Educational Association, and the Spelling Reform Association. His remains were interred at Muncie.

His work is done, and faithfully and earnestly done, and there is not a dishonorable chapter in the history of it.

His devoted wife, who has more acquaintances among the teachers than any other woman in Indiana, may rest assured that she has the heartfelt sympathy of a host of warm friends.

BOOK TABLE.

A JOURNAL OF MORPHOLOGY is to be started by *Ginn & Co., of Boston*. Those interested in the subject will take notice.

THE WIDE AWAKE: *Published by D. Lothrop & Co., of Boston*, is one of the best juvenile magazines in the land. It will be a continuous source of delight and profit in any family in which there are young people. No one can make a mistake in recommending it or subscribing for it. It is "a thing of beauty and a joy forever."

D. C. HEATH & CO., of Boston, are publishing a series of Outline Maps for the use of geography and history classes. The plan is to have the filling in of the map accompany the study of the text—certainly a most excellent idea. There can certainly be no efficient study of either geography or history disconnected with the use of the map—and the only way to know a map with accuracy is to make it or help make it.

COMPARATIVE GEOGRAPHY: *By Carl Ritter. Cincinnati: Van Antwerp, Bragg & Co.*

This great work has been translated from the German by Wm. L. Gage. It should be read by any one who desires to study geography as a science and to see the subject in a broad, comprehensive way. The book is not a large one and not an expensive one, and should be in the hands of all teachers of advanced geography.

HOW WE ARE GOVERNED: *By A. L. Dawes. Chicago: Inter-State Publishing Company.*

This volume differs from other books on civil government chiefly in the fact that the author has written it especially for young people. The language is simple, the explanations clear, and the statements full. The book is put up in good form and printed in large clear type. The author has done a good work, which will certainly be appreciated.

MASSACRES OF THE MOUNTAINS: *By J. P. Dunn, Jr. New York: Harper & Brothers.*

Among the many excellent books given to the reading public by the Harpers this volume, both on account of subject-matter and literary excellence, must assume high rank. Its author, Mr. Dunn, is an Indiana man, and in this his first public appearance claims both our appreciation and admiration. The title, "Massacres of the Mountains," is hardly a fair index of the contents. It gives, it is true, a very moving account of the scenes of suffering and blood-shed in which the early settlers of the far-west were involved with their savage neighbors, but it also gives an exceedingly interesting and detailed history of the different tribes of the western states and territories. Locating them on the map, which forms a frontispiece to the volume, the writer proceeds in successive chapters to introduce us to these different tribes through their faults and virtues, showing how these faults were intensified and these virtues perverted in most instances by contact and dealings with the white pioneers. Mr. Dunn does not go to the extreme of making a saint or hero of the Indian. He recognizes the fact that as a class they are lazy, and that many of them are vicious and will get drunk and steal, but he claims these are traits common to white men as well. The chapter containing the Massacre of Oatman Flat, with the characterization of the Mohaves, will illustrate how depraved and cruel the Indian can be, while the chapter on the Nez Percés, with

the characterization of Joseph their chief, will prove that an Indian can rise even to grandeur and nobility of soul.

The account of the Mountain Meadow Massacre and the Tragedy of the Lava Beds, as well as the description of the scenes and events connected with the death of Gens. Canby and Custer, are masterly pictures of Indian treachery, and the reader draws a long breath at the close of their perusal, thankful that such events were not his birth-right.

Mr. Dunn is clear-sighted enough to recognize the relations that exist between the general government and these its dependent wards, and bold enough to characterize the conduct of the general government in no gentle terms. He reasons that fairness and honesty and truthfulness are requisite in every compact between man and man in the ordinary walks of life, why then should a great and powerful nation be other than fair and honest and truthful with these people whom she has rendered dependent by taking their lands. The present policy of collecting the Indians in reservations at the cost of the general government and *compelling* them to remain there or be considered outlaws, Mr. Dunn thinks questionable. Questionable because it is a measure of force, and complacency is necessary to civilization. The solution of the Indian problem can only be reached through the difficult processes of a kindly and charitable relation between the Indian and the white man. Mr. Dunn's book must accomplish great good in demonstrating the necessity for such relations, thus helping forward the solution.

In conclusion, let me state that to a student of the Indian question, this book must afford great satisfaction. It is accompanied by a very complete general index, and contains also its list of authorities, both features enhancing the value of the book as a work of reference.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

BUSINESS NOTICES.

Geology.

Isn't SHALER'S FIRST BOOK IN GEOLOGY the best book you can find for the Summer term? It is simple, brief, practical, fascinating, and commended by the best teachers of the subject. Price, \$1.00

DAVID S. JORDAN, *Pres. of Indiana University*: It is not unlikely that I may use it. (Oct. 4, 1884.)

JOHN C. BRANNER, *Prof. of Geology, Indiana University*: I can not do better than recommend its use in the schools of this State. (Oct. 26, 1885.)

HENRY L. OSBORN, *Prof. in Purdue University*: I shall take every opportunity of recommending its use. (Dec. 3, 1885.)

JUNIUS B. ROBERTS, *Prin. of Indianapolis Seminary*: It is better fitted for our use than any book on this topic that I have seen. It is my present purpose to use it as a text-book. (July 29, 1884.)

W. W. BYERS, *Prin. of Terre Haute High School*: I do not know of any other book that compares with it. (Oct. 8, 1884.)

CHARLES O. THOMPSON, *Late Pres. of Rose Polytechnic Institute, Terre Haute*: It is one of the most sensibly written text-books we have. (Oct. 6, 1884.)

JOHN S. IRWIN, *Supt. of Schools, Fort Wayne*: It is a most admirable book for the purposes in view.

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READING A MEANS, NOT AN END.

BY IOLA ROUNDS.

WHAT a blessing it would be to the children, if all our teachers and school officers should take on the interrogative mood and devote themselves to a consideration of the whys and wherefores of every subject laid down in the course of study. The recent efforts of publishers in the line of supplementary reading matter, would seem to indicate that there has been an awakening with regard to one subject at least. It is a fact, however, that in many schools the reading lesson is a dreary thing, for the sole effort seems to be directed to the "calling" of words in the reading book as far as the page designated in the grade limits. As soon as they can read, boys and girls are sure to go somewhere to find more interesting matter than is contained in this time-honored volume, and it would be wise for their teachers to inquire where. For answer, a glance at the list of subscribers to some of the circulating libraries, whose stock contains anything but choice literature, or into the homes where the *New York Weekly*, the *Fireside Companion*, or the *Police News* furnish mental food for the family, is sufficient to show that both teachers and parents have left some duty undone. The teacher who considers that she is exempt from blame because "it is the parents' duty to see that their children are furnished with suitable reading matter," must remember that she is responsible for whatever it is in her power to do. Every cultivated teacher will find it possible to develop in her pupils such a taste for good litera-

ture as shall make all this trash distasteful, and to give them a knowledge of books which shall enable them to choose, when, as is too often the case, the parents are unable to do so.

Reading is useful only so far as it is a means of gaining knowledge and culture. Next to the influence of cultivated associates, the influence of good books is most powerful, for is it not true that the words of some favorite author remain in the mind long after such school-day bricks as analysis and parsing are forgotten. In view of these facts, the teacher who inquires earnestly concerning the *why* of teaching reading, must conclude that, practically, it is more necessary than any other subject, for by means of it knowledge may be indefinitely extended. As a means of culture it can not be over-estimated, for through good books one may associate in thought with those whose like she may never have the good fortune to meet in any other way.

Having considered the importance of teaching this subject of reading, it is no difficult matter to determine what to teach. The work may be divided into two stages; *learning* to read, and *reading*. In other words, the child must be taught first to recognize words as signs of ideas, and then the broad field of literature may be opened before her. Above all it is the teacher's duty to cultivate in her pupils such a love for good books as shall ensure extended and profitable reading through life.

How shall reading be taught so as to accomplish this end? It has been stated that *pupils should be taught to recognize words as signs of ideas*. If this is so, surely the books used should contain a record of ideas, and, moreover, of ideas which children can comprehend and appreciate. Such a thought, however, seems never to have entered the head of the genius who makes the primers. A hundred years ago, the little wooden covered "New England Primer" offered as a means of instruction the "shorter catechism," hymns, texts of scripture, and information that—

In Adam's fall,	Young <i>Obedias</i> ,	<i>Zacheus</i> he
We sinned all.	David, Josias,	Did climb the tree
	All were pious.	Our Lord to see.

This and much more of the same sort, illustrated with a piety which certainly obeyed the second commandment, in that it

made nothing whose likeness might be found in the heavens above or the earth beneath or the waters under the earth, could not fail to prove a source of great amusement to the children of to-day.

But are the modern primers a century in advance of the one just mentioned? While they are not beyond the understanding of children, most of them are eminently stupid and silly. For example, a primer used in one of our larger cities offers such nonsense as this: (Only another instance of "Zacheus *he*.")

"The old red cow,
She gives the milk;
My mother gives the bread,
I put the bread into the milk,
Then put them in my head."

"I'm a little girl, I know,
But I am not a fool."

"And now good bye my little book,
I've read your lessons through,
Without one touch of a-b ab,
Or e'en one touch of blue."

To this last word, as a fitting close for such a book, a note is appended which would do credit to the satirical "Ben Franklin Primer" published a few years ago.

The primer from which these eloquent lines are quoted is no worse than many others. The lessons in all of them have to do chiefly with things familiar only to country children. It seems never to have occurred to the authors that city children, too, must learn to read. A few skillful questions would prove to any teacher that the child's stock of ideas is not materially increased by reading constantly of objects which he has never seen. Many teachers, who have these ridiculous primers and first readers to deal with, work mainly from the black-board until their pupils are able to read the leaflets published for supplementary work—Babyland, or such matter suited to their capacity. It is to be hoped that before long all the primary teachers will have the courage to consign nonsensical primers to the waste-basket or the flames.

In some of the reading books for higher grades there is scarcely less to be condemned. A certain Fourth Reader affords children of ten years an opportunity to refresh their drooping spirits by reading such cheerful poems as *The Wreck of the Hesperus*, *Mary of Dee*, *The Three Fishers*, *He Never Smiled Again*, and last, but not least, *The Dream of Eugene Aram*.

Teachers who encounter such reading books ought to lay them aside and get some magazines, some of the supplementary reading matter, which is published now at such low rates—anything, in fact, but those miserable “readers.” To be sure the grade limit says that a certain page of this book is to be reached, but the object is to teach the children to read, and if that be accomplished who could condemn the means?

After all, if the work in the reading class be ever so well done, it must needs be slow, for the pupils are *learning* to read. They have many difficulties to overcome, and it is at best rather tedious business. To prepare the way, then, for the pleasant work that is to follow, the teacher must interest her pupils in books, by reading to them and by encouraging them to read the books, of which it is to be hoped she will keep a liberal supply on her desk. During the first and second years Grimm’s and Anderson’s *Fairy Tales*, *Seven Little Sisters*, *Water Babies*, and many other books of this class may be used with profit for reading to the children. There is such a host of these books that one has only to choose, and the children will be glad to extend the teacher’s library by occasional loans. During the third and fourth years the custom of reading to children should be kept up, but they should be encouraged to read for themselves as well.

A most excellent practice, which should begin in the primary school, is that of requiring the children to “learn by heart” each week some choice sentence, some pretty verse, or perhaps a short poem. The selection should always be something that they can understand and appreciate, and which they will then be sure to like. The verbal memory is most active during childhood; and if the habit is early formed of memorizing the best of what is read, it will be a source of benefit and pleasure in after life.

With pupils who enter school at six years of age, four years of

faithful, skillful, and philosophical teaching will accomplish what has been suggested as belonging to the first stage of the work. At ten years old children should be somewhat familiar with words, and should be able to read matter suited to their age, with sufficient expression to make the meaning clear. If it has been necessary to use the Reader up to this time, it should now be laid aside, or, if a good one, it should be used like any other book, only until the children lose interest in its contents. When pupils are confined in their work to the usual reading book they are sure to turn aside from the perusal of its stupid scraps toward the miserable trash which they are apt to find more interesting, and which they can now read with ease. Children are not, as a rule, interested in short, disconnected, disjointed literary productions. They want stories, they want books, and they will have them. Teachers may as well submit gracefully and give them the right sort. There are plenty of good books and they are cheap enough, so that almost any school may possess a few volumes, enough to make a study of the one or two authors that may be profitably considered during a year.

In this study the teacher should aim to give her pupils an idea of the life and character of the author. She should lead them to notice the characteristics of his style, and to trace his life and thought in his works. Special attention should be given to studying the people and the country that may be in any way connected with the work, and pupils will often find it profitable to do some parallel reading. The study should be made to read *out* as well as *down*.

It may be a simple matter for those who have read extensively to understand how Hawthorne, a man descended from the most rigid Puritan stock, living the life of a recluse, surrounded by all the beauty of nature in the famous little village of Concord, or in the silent, antiquated city of Salem, could write the story of the conscience in the *Scarlet Letter*. Indeed it is easy enough for a mature mind to trace effect in any author's writing to its cause in circumstances or in the natural bent of the mind. But to make the reading of children effective it is necessary to *lead* them to think in this line. Most of them are merely interested

in the story and many a teacher, should she question her pupils, might be surprised as was the father who set his child to read *Paradise Lost*. When he questioned her on it she could tell the story perfectly, but her only comment was: "I am glad the devil came out ahead."

During this stage of the work, as before, the aim should be to lead the children to understand, to appreciate, and to express. As an aid in accomplishing this three-fold purpose, note-books will be found invaluable. Pupils, especially those in the higher grades, should be required to note in them points with regard to the life and character of the author studied, original criticisms on his words, favorite scraps to be committed, anything in fact which may be considered of prime importance. Above all the children should be led as they grow older to form opinions of their own and to present original ideas for the criticism of the teacher.

The following outline may serve as a suggestion as to the authors to be studied:

Fifth Year—Longfellow and Whittier: Shorter poems. Hawthorne: *Wonder Book*, *Tanglewood Tales*. Louise M. Alcott: *Little Women*. Hans Christian Anderson: *Fairy Tales*.

Sixth Year—Whittier: *Snow Bound*. Irving: *Sketch-Book*, *Bracebridge Hall*, *Alhambra*. Abbott: *Histories*. Lamb: *Tales from Shakespeare*.

Seventh Year—Whittier: *Tent on the Beach*, *Bridal of Penacook*. Hawthorne: *Snow Image* and *Twice Told Tales*. Scott: *Lady of the Lake*, *The Talisman*, *Quentin Durward*.

Eighth Year—Longfellow: *Hiawatha* and *Courtship of Miles Standish*. Hawthorne: *Mosses from an Old Manse*. Scott: *Kenilworth*, *Ivanhoe*. Tennyson. Dickens: *Christmas Carol*. Selections from *American Authors*, giving a brief outline of American literature.

Ninth Year—Shakespeare: *Julius Cæsar*. Selections from *English Authors*, giving a *brief outline of English literature*.

N. B. Not all the books named in this course of supplementary reading are to be studied in the school-room, but these, and more if possible, are to be read under the direction of the teacher.

It is difficult to make selections from standard authors which shall be suited to children of various ages. For example, most of the women who are noted as writers have given us either stories that the children are familiar with through magazines and libraries, or else their writings deal with problems of life beyond the comprehension of girls and boys.

The course outlined above has been prepared and tested with special reference to graded schools, but any teacher will be able to select from it books suited to the needs of her own school, be it ever so "ungraded."

If such a course of study as the one suggested were faithfully carried out, pupils might come to the study of literature in the high school prepared to enjoy the work and to profit by it; while those who never go beyond the grammar school would have a knowledge of books and a love for them which could not fail to prove a blessing. Even the small amount of work that might be accomplished during one year in a "country school" would bring its reward to the already over-worked teacher. Her pupils would look upon her as their friend, and in after years many happy hours spent with some favorite author would recall the faithful and cultivated woman who first inspired them with her own love for good books.

THESE PEOPLE—A DREAM.

BY W. H. VENABLE, LL. D.

ONE afternoon, in midsummer, I fled from the dust and heat of Broadway to the pleasant shades of Central Park. I saw a throng of children chasing hoops, and while I watched them a stately carriage rolled down a broad avenue and stopped near the spot where I stood. The vehicle was open, and in it sat two lordly men. They were elegant,—even majestic in person, and their equipage was magnificent. There was a dignified arrogance of manner about the men that betokened habitual rulership, and was quite in keeping with the coat-of-arms emblazoned on the panel of the carriage. I mused: "Are these of the American

nobility? or may they be hereditary Princes?" One of the men rose,—imposing, haughty, and with a comprehensive gesture, called his companion's notice to the moving masses of humanity about them, and said: "This park is a fine thing for these people." *These people!* The intonation, the emphasis, the condescending modulation with which the lordly man pronounced these words fixed my attention. There was a pitying scorn in his speech which seemed to put a million miles between himself and the tired mechanic who sat on the iron seat at the side of the drive-way. And I could not help observing that a poor woman, resting on the sward, with a sick baby in her arms, glanced at the lordly man with a look that said, "He is a Prince and we are Pariahs." I did not like that abject look.

"These people!" "These people!" The words rang in my memory. "These people!" The haunting phrase sounded in my brain that night when I slept. For I dreamed a dream of "These people."

I dreamed that I beheld, moving down Broadway, an interminable procession—the procession of the Industries: farmers, mechanics, manufacturers, miners, lumbermen, traders, transporters, artisans,—all classes of working men, bearing the symbols of their employments. The procession moved to the sound of triumphal music. Banners streamed over the heads of the marching hosts, and on every banner I could read the words, "These people,—the sustainers of material prosperity."

My dream changed, and I saw, depicted in the air, a series of wonderful scenes. The pictures came and went like the dissolving views of a magic lantern. Some invisible hand exhibited, in succession, lively images of the processes and products of the professions and high arts. The pulpit, the press, the rostrum, the bar, the studio, the library,—all the apparatus and appliances that promote civilization were shown. I saw innumerable laborers at work in the various departments which call for thought, genius, culture, eloquence, wisdom, virtue. And over each tableau representing men working with hand or brain,—with tongue or pen, or pencil, or microscope, for the bettering of the world, I saw inscribed, in golden letters, the words, "These people,—the conservators of mental power."

My dream changed. I was in a broad street of a great metropolis. Night was upon the city, but not silence, for the street was a sea of men,—a sea in storm. Yells and curses and shots and groans of pain told that the maniac Mob had broken his chain and was throttling his keeper Law. Torches were applied to magnificent buildings, roaring flames licked out the stars. Methought the lordly man appeared at a high casement, his companion at his side, pale in the glare of the flames. The lordly man waved his hand deprecatingly and said, "What is to be done with these people? these furious people?"

My dream changed. I was in a populous city on election day. The masses crowded to the voting places. The polls were open. Democrat, Republican, native and naturalized, white and black, twenty-one and ninety,—the citizens filed up to the ballot-box, each holding on to the chosen ticket as if that little slip of paper were a pass to eternal salvation. My heart beat high. For though I saw in the crowd the lurking dog of corruption, and the demon fraud, I could not but remember, not the scornful words of the lordly man at Central Park, but the grand keynote of the Constitution—"We the People."

Once more my dream was changed. I trod labyrinths of squalor and misery. My eyes met all forms of vice and crime. So base, so loathsome, so frightful were the wicked dens of the city, that I hurried away to the peaceful villages and farms. I walked along a lonely country road, through a gloomy wood, near a dark hollow. A scream of terror startled me, and rushing forward I beheld a school-girl struggling in the grasp of a tramp. With a quick impulse to rescue, and a fierce passion to chastise, I fired a ball to the man's heart, but when, in my dream, I saw his blood creep in the grass, I reflected, "Alas that such cure is the only one for my brother, for this tramp too was one of 'These people!'"

My dream ended with a beautiful vision. I saw the school children of the United States of America, assembled in one stupendous convention. Fourteen million children. They sang in chorus the song of universal amelioration. They sang the song of secular redemption. These people, said my heart, these little

people, are the hope of the Nation: they are the Reformers of the World.

The great concourse of boys and girls marched, as they sang, and each bore a white shield inscribed Virtue, and each a shining spear named Knowledge. Thus armed and protected they marched on, to win the battle of life, and over them waved a standard with the magic words—"These People."

Was this my dream only a dream, or was it the similitude of what is and of what shall be?

(V) *A HIGH SCHOOL COURSE OF STUDY FOR THE STATE.*

[The following Report was adopted by the High School Section of the State Association at its last meeting.]

YOUR committee, appointed last year "to readjust a uniform Course of Study for the High Schools of Indiana," proposed by a committee appointed in 1885, respectfully submit the following:—

To your committee it seems impracticable to propose a uniform High School Course that would adapt itself readily to the widely different local circumstances in the different cities and towns of the state. Local needs, wants, tastes, opportunities, means, local and personal views of life, local culture, etc., play so important a part in determining the possible scope of the local high schools, that a course adapted to one community is impracticable in another.

Indeed, it seems scarcely desirable to propose such a course at the present stage of the educational development of our state. We live in a period of pedagogic transition; we are steadily growing out of a past in which the imparting of knowledge formed the chief work of the school, into a future in which the development of mental power will form its chief aim.

The views concerning the place of the high school in the educational work of the state are so unsettled that this alone would preclude the adoption of a uniform course of study. Some would make of the high school merely a preparatory school for the uni-

versity; others would make it a mere business college; some would assign to it a fuller preparation for higher manhood and womanhood than the grammar school can give, and others look upon it as a preparation for a life of refined leisure.

Before a uniform course of study can become practicable, an organic connection between the elementary school and the high school, and between the latter and the university, must have been established. These departments must have found a common beginning and a common aim, and must have agreed upon the place each is to fill in the common work.

That this time has not yet come is obvious. That with a disfranchised profession of teachers, educational legislation in the hands of partizan politics, and public universities and normal schools practically almost isolated from the rest of the educational system of the state, this time will be long coming, is to be feared. At any rate, in the opinion of your committee, this renders it impossible, at present, to prepare a uniform course of study, such as we were called upon to readjust.

With these remarks your committee might close its labors, and ask to be released. Undoubtedly, however, the appointment of the committee was prompted by a desire to hasten the advent of a period when a more fully organized school system than that which our state now possesses, will render possible the adoption of a uniform course of study without prejudice to educational progress.

For this purpose your committee offer, partly in proof of their position and partly as an aid to the desire which prompted its creation, an Order of Studies suitable for High Schools,—an order of studies which all high schools may, or perhaps should, strive to approach, if they mean to assist in hastening the period hoped for,—an order of studies sufficiently in accordance with the possibilities of our communities to insure progress along the whole line.

In this work your committee looked upon the high school as the crowning department of the common schools of our towns and cities. To these the normal school and the universities have been added in the interest of certain professional wants and

needs of the commonwealth. Admission to these professional schools implies that the candidate has passed creditably through the high school; and it is proper that the high school should prepare students for this admission. Yet it should not sacrifice to this requirement considerations of more general value, lying in the needs and wants of the great majority of its students who do not expect to enter these professional schools.

Our common schools consist of the primary, grammar, and high school departments. In a well organized system each of these departments, while it considers the pupil in all his relations, stands for a certain period of development. Thus the primary school has charge chiefly of the intuitional development, the grammar school of the period of intellectual development, the high school of rational development. The primary school deals predominantly with observation; the grammar school with comparison and description; the high school with experiment. The chief material of the primary school are things; of the grammar school, words; of the high school, relations. The primary school forms notions; the grammar school, ideas; the high school, purposes. The primary school deals with the outer; the grammar school with the inner; the high school connects the two.

Within these limitations, the high school should in all its studies follow a logical order of subjects. To your committee it seemed for many obvious reasons best to confine these subjects to four lines. Two of these—Science and Mathematics—deal with nature; and two—History and Language—deal with culture. Others might have been added, and, doubtless, will be added in future proposals of a similar character; but, for the present, these limits seemed to be indicated by every consideration of reasonable moderation.

It will be noticed, too, that the committee do not consider any of the so-called ordinary branches *completed* in the grammar school, at least not in the ordinary sense of the word *completed*. A sort of completion may be conceded so far as the formation of certain fundamental ideas and a certain degree of practical skill are concerned, but each of these subjects must appear again in the high school for the study of relationships; not for *review* so much, but rather for *fruition* in the rational development of purpose.

The order of studies agreed upon is as follows :

1. MATHEMATICS. { Number: General Arithmetic, Algebra, Applications to Geometry, Science, etc.
Form: Measurement and Experimental Geometry, Geometric Laws, Trigonometry, Surveying (Geometrical Drawing).
2. SCIENCE. { Force: Experimental Physics and Chemistry, Physical and Chemical Laws, Geology. } Physical
 { Life: Botany, Zoology, Physiology. } Geography.
3. HISTORY.—Pragmatical History, Political Economy, History of Civilization.
4. LANGUAGE. { English. { a. American Literature, English Literature.
 { b. Etymology, Grammatical Construction, Rhetoric.
 Other Languages: (Latin, German, French, etc.)

An order of studies similar to this will adapt itself to all circumstances, however limited ; and will sustain all striving, however extended. In each line, the student passes from the nearer to the more remote ; the subsequent rests logically on all that precedes. In each line the work is based on experiment, passes through generalization and analysis to purpose and synthetic application.

In the selection of its course, the high school would always contract or extend its work within the requirements of this order of studies. It might contract or extend the respective fields of experimental research, of analytical generalization, and of synthetic application, but in the fields selected, it would insist on all these things ; so that the student may learn to work always for a purpose, and know how to find and to realize this purpose.

Thus, if, in the line of science studies, the school were limited to physical geography, it would even then spend the earlier portions of the time given to this subject in efforts to clear up, to generalize, to arrange, and to round off the student's knowledge of natural history and physiology, of physical and chemical phenomena and laws. If limited in mathematical form—study, it would still, after selecting the applications which the student may reach, base their study on an adequate preparation in experimental work and a sufficient comprehension of the geometric laws involved.

On the other hand, it is easy to see, that even the most favored cities will obtain a satisfactory completeness and wholeness in their high school work, will lead the student to a satisfactory fruition from his school work in life, in the measure in which they adapt their work to such an order of study.

Again it will be seen that this order of study leaves ample

room for preparation for college. Inasmuch as the college devotes so much of its work to the advanced phases of analytical generalization and synthetic application, the high school work in these phases may be clipped sufficiently to enable the candidate for college to gain an adequate knowledge of Latin, German, and other matters the college may require.

For the boy, too, who means to enter business, book-keeping and whatever belongs to it may be made a most serviceable application of thorough number-work; and in other lines of study suitable applications may be found.

In conclusion, the committee desire to express their deep sense of gratitude to last year's committee for the thorough and efficient preparatory work of the latter. The painstaking, conscientious labors of the latter made it possible for this year's committee to survey the ground and to reach a conclusion. Even in the preparation of the order of studies, your committee were largely guided by the excellent presentation of this subject in last year's report.

Indeed, with a few changes in the course of study prepared last year, changes of recommendations made evidently under the pressure of an attempt to reconcile a variety of local wants and individual views and needs,—the course proposed by the last year's committee might take the place of the order of study here submitted.

Respectfully,

W. N. HAILMAN,
Ch'n of Committee.

AN ITEM IN THE SPELLING REFORM.

HENRY A. FORD, A. M.

THE first appendix to the recent book of "Mistakes in Writing English," by the veteran Boston proof-reader and author, Mr. Marshall T. Bigelow, contains a suggestion which should be known to all readers of the School Journal, and should be adopted wherever our language is written or printed. It would unify the usage of scholars, prevent innumerable blunders in their writing, as well as that of the less instructed, and aid in the sim-

plification of our orthography, which is surely, though very slowly making progress.

Mr. Bigelow cites the well-known rule, "The regular plural of nouns is formed by the addition of *s* to the singular"; but under it gives without the *e* some plurals which we are wont to see ending in *es*, as *halos*, *heros*, *mottos*, *alkalis*, *Miamis*, and perhaps *rabbis*. He allows the *es* to monosyllables ending in *o*, except when this is preceded by a vowel, as *noes*, *woes*, *twos*; but points well the absurdity of spelling *mosquitoes*, *volcanoes*, *potatoes*, etc., with a totally useless and superfluous letter (*e*), while *memento*, *canto*, *grotto*, *piano*, and many more, take only *s* for the plural. There is no reason but arbitrary usage and the dictionaries for the distinction. Similarly he would treat *alkali*, *mufti*, *cadi*, *Maravedi*, *rabbi*, and the like, with *Abnaki*, *Miami*, and other tribal or geographical designations—which are, indeed, now generally written without the *e* in the plural termination.

Our author also proposes the elision of *e* in the third person of all verbs of like ending, except in monosyllables; as *echos*, *does*, *goes* (but *coos* and *woos*, of course). The compounds of *do* and *go* would follow the rule in *outdoes*, *undoes*, *undergoes*, *foregoes*, and other forms. "Words," he says, "like *no*, *wo*, *go*, and *do*, would look very awkward if written without the *es* as a termination. But the omission of *e* in all such words of more than one syllable would hardly be noticed, and I venture to say that, with respect to more than half the words ending in *e*, no one could say without looking into the dictionary how the plural should be written. * * It can make no difference with the pronunciation, and will relieve the writer and printer from all doubt as to the correct spelling, by simply extending the regular rule for the formation of the plural to all this large class of words."

That careful and painstaking scholar of blessed memory, the late W. D. Henkle, of Salem, Ohio, formerly an editor of the *School Journal*, once undertook an examination of the entire vocabulary of Webster's Unabridged Dictionary, that he might know and enumerate the nouns ending in *o* which make their plurals respectively in *s* and *es*. It was a tremendous labor,

which would have been unnecessary had Mr. Bigelow's innovation become regulative in our language a generation ago. The toil ought to have been made needless long before.

DETROIT, MICH., April, 1887.

BEAUTIFUL THOUGHTS ON BOTANY.

HERE are a few live words from Dr. Horne, of Allentown, Pa., concerning the study of botany. They are good. He says:

"Now for botany! School is being called, at this season, in the great kingdom of nature! We have just had a good, long recess. Now let us up and to work. The botany class should be organized at once. If there can not be regular, systematic study made of botany, the next best thing, or, perhaps the first best thing should be done, namely, to study the vegetable world in an informal manner, as a great object-lesson. There is vastly more sense, and profit too, in teaching children the names, character, and characteristics of plants, than in the distasteful rignarole, practiced sometimes, of holding up an object and asking a number of hackneyed questions about it, in a stereotyped style.

What a freshness and beauty, and, withal, what an interest in the kingdom of plants! Take out your pupils, and commence with the first flower whose head is lifted out of the snow-bank. Familiarize the children with every one of the first flowers of spring. Pass none, neglect none. If you don't know the name of the early peeper out of the ground which is brought to you, hunt up your botany, and be determined that you will know. Don't miss the early crocus, the daffodil, the trailing arbutus, the various anemones, the violets; dig up the beautifully colored skunk cabbage, smell your fingers after you have handled it; you will thus learn to know it by the sense of smell, as well as of sight; climb the trees, and bring in branches of the maple with their early flowers; ransack meadow, field and woods; there are intensely interesting object-lessons to be studied everywhere."

A more lovely May would be difficult for the oldest to recall.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

THOUGHT-READING.

IN order to understand what thought-reading is, several distinctions are essential: 1. The difference between reading and ordinary speaking and between reading and declamation or recitation. 2. The difference between oral reading and silent or thought-reading. 3. The difference between primary and advanced reading. 4. The difference between thought-reading, emotional reading, and that which addresses the will. 5. The difference between narration, description, exposition, argumentation, poetry and oratory, regarding these as the primary forms of discourse. 6. The difference between reading to learn to read and reading for special culture and knowledge. 7. The difference between good reading and bad reading.

a. Reading differs from speaking in that the latter requires two simultaneous processes, while the former requires three. In speaking, we arrange our ideas and express them, taking care to adjust our expression to the understanding of the mind we address. Reading requires one to arrange his ideas and express them in a form suitable to the understanding of the mind addressed. It requires the additional process of interpretation, or the association of definite and clear ideas with written letters, syllables and words, regarded as symbols. The last is the really difficult part of the procedure. Without definite and precise interpretation there can be no good reading. Thought-reading is almost, or quite, synonymous with interpretation.

Declamation or recitation substitutes in place of interpretation, the memory of what has been previously interpreted. The mere learning of words does not constitute good declamation or recitation, any more than the mere mouthing of words does not constitute good reading.

b. Oral reading employs the voice, and presupposes that what is read has previously been interpreted, that is, the exact meaning of the individual words and sentences fixed, and the

meaning of the whole series of sentences definitely determined upon. Oral reading, further, requires a trained voice, acquaintance with proper pronunciation and enunciation, and ability to adjust one's oral expression, on the one hand to the thought, and, on the other hand to what Hill calls the pre-existent state of the mind addressed. The success of oral reading depends, as pointed out above, on the thoroughness of interpretation.

c. Advanced reading is not, as supposed by many, a more difficult form of primary reading, but a kind of reading essentially different from it. Primary reading is concerned with learning the ideas expressed by individual words and sentences, and in mastering the forms of the words as they appear to the eye, and fall upon the ear. In advanced reading, the interpretation of single words and sentences is presupposed and is subordinate to the interpretation and expression of connected series of sentences, which we call "discourse," "selections," "themes," and the like. Advanced reading is, likewise, more especially concerned with the niceties of correct oral expression. But as persons who read, read twenty times silently to once aloud, advanced reading is more especially concerned with the interpretation or thought-reading process. In this sense, it is almost a synonym of thought-reading.

d. Some reading is intended to move the intellect; some to move the emotions, and some to move the will. All scientific reading-matter is of the first kind; poetry, of the second, and all moral maxims, principles and advice, and all oratory, of the third. It is not asserted that emotional reading does not move the intellect, or that didactic discourse does not move the emotions. Neither of these propositions would be true. Any form of reading exercises all three of the great faculties of mind, but every good piece of discourse is intended to move some one more than the others, and is named from its predominant trait. The efficiency with which a selection accomplishes its purpose depends primarily on the efficiency of the interpretation or comprehension.

e. Every piece of reading is either a description, narration, exposition, argumentation, piece of poetry, or of oratory, using

the word oratory widely to mean whatever is intended to move the will. The chief question in explaining the processes of reading, with reference to these forms of composition, is, What is the movement or process of thought in each?

In description, the attention of the describer and of the reader and hearer is supposed to move consecutively over the object described.

In narration, the object is supposed to change consecutively before the attention of both narrator and hearer.

In exposition, the aim is a deep understanding of the object, and the expounder leads the attention of the one instructed from the superficial and easily apprehended attributes of the object to its real nature, purpose and cause.

In argumentation, the purpose of which is a changed attitude of mind toward something, the attention is led along a series of connected propositions to a final proposition or conclusion, which causes a change of attitude in the mind toward some object or action.

In poetry, the attention is led over those attributes of an object or series of objects, which excite the imagination to construct images that move the emotions.

In oratory, the attention is led over these attributes of an object or a series of objects, which excite the imagination to picture possible change in actions or objects.

Narration is based chiefly on the relation of changing time; description, on changing place. Exposition and argumentation employ the relations of existence, substance and attribute, whole and part, cause and effect, comparison and contrast, time, space, and design. Poetry and oratory are really not new forms of discourse, viewing it on the kind of process, since they differ from the others mainly in purpose. They involve narration, description, exposition and argumentation in various degrees, and thus employ all the relations, mentioned above, included in the first four forms of discourse mentioned. It may, perhaps, be questioned whether poetry in its true sense includes anything of either exposition or argumentation.

f. In learning to read, one studies the processes he employs with a view of consciously employing them to aid in the work of

reading. He also practices these processes to gain skill in their application. This is quite a different procedure from ordinary reading, which does not primarily seek to master the process of reading, but is in pursuit of general culture and information. The failure to recognize this broad and patent destination is the source of much bad work in reading. It leads to bungling, because it assumes many things that are not true, and can be true only after the pupil is relatively matured in reading as an art.

g. To emphasize the difference between good reading and bad, one can not do better than quote a sample brick from Mark Twain's "English as She is Taught."

CATO'S SOLILOQUY.—One day Mrs. Gastrel set a little girl to repeat to him [Dr. Samuel Johnson] Cato's Soliloquy, which she went through very correctly. The Doctor, after a pause, asked the child—

"What was to bring Cato to an end?"

She said it was a knife.

"No, my dear, it was not so."

"My Aunt Polly said it was a knife."

"Why, Aunt Polly's knife *may do*, but it was a *dagger*, my dear."

He then asked her the meaning of "bane and antidote," which she was unable to give. Mrs. Gastrel said,—

"You can not expect so young a child to know the meaning of such words."

He then said,—

"My dear, how many pence are there in *sixpence*?"

"I can not tell, Sir," was the half terrified reply.

On this, addressing himself to Mrs. Gastrel, he said,—

"Now, my dear lady, can anything be more ridiculous than to teach a child Cato's Soliloquy, who does not know how many pence there are in sixpence?"

Mark Twain quotes this from Crocker's Boswell's Johnson. Need he have gone so far to find illustration of speaking words, in reading or recitation, without any adequate idea of what they mean? He could probably have secured a better example by going to the nearest school-house.

If the teacher of reading is master of these differences, she will succeed. Whoever grasps clearly the limitations of the subject set forth in these distinctions will be able to devise an effective method of teaching the subject. And such teachers as are too indifferent or too lazy to master them, will teach very little, or any, the better, by having given to them a string of devices.

SOME BOOKS AND OTHER BOOKS.

THE Reading Circle Board of Control, if they are correctly reported, are authority for the statement that Green's Short History of the English People excelled, in number of copies called for, any other book of the list offered for the current year. If this is true, and it seems to be so, the fact is a sufficient warranty for some remarks on the alleged idea that teachers are not sufficiently strong to bear a good thorough, substantial book, but must be fed on the milk and water of "easy" books. Certain "light" works are supposed to be within the reach of ordinary mortals, but certain others, denominated "heavy" and "hard", are supposed to be comprehensible only to the elect, the philosophers and the sages of the school-room. A wishy-washy aggregation, gathered with a hay-rake, is supposed to be better and easier than a lucid and clear exposition by a master of the subject. This view of books is substantially saying that a tyro who knows no part of his subject with thoroughness is superior to one who has broken up his ground to the bottom. According to this, an amateur is to be preferred to a professional. This sentiment is, perhaps, an outcropping of the prejudice against specialists, a provincialism which time alone can conquer.

The idea that the immature productions of amateurs and compilers are "easier" than the substantial works of masters is a fallacy and misconception. This fallacy rests on the assumption that such books accomplish some real and substantial progress toward a knowledge of the subject. Such is not the case. They foster memorizing, shallowness and general good-for-nothingness of mind. Some of the books which are, or have been in the Reading Circle Course are so barbarously constructed that an expert in their subject-matter would be unable to reconcile their conflicting and nugatory statements. One which has been in the list is not only a mere heap of raked up odds and ends in thought, but violates the principles of good English on every page.

The Reading Circle Board of Control ought, in large part, to be exonerated from the responsibility of choosing such books. The choice was, in large measure, forced on them by outside senti-

ment. If the bulk of the teachers are indoctrinated into the belief that they must have such books, or none, the board must either select none at all, or select such as are called for. The sentiment of the board, if left to itself, would, we think, give us a better class of books.

Nobody with any knowledge of the composition of the board would charge that its members are open to direct influence which looks toward choice of a low grade of books. Its members are far above any such imputation. But, perhaps, they have listened a little too assiduously to that voice of the siren—"public sentiment." The plain fact is that this so-called public sentiment is very largely an echo from the manipulations of the book-houses. Their agents have so mixed up with institutes, meetings and conventions, that these bodies have mistaken the sentiment of such disinterested gentlemen for their own. And this is, it seems, the voice that came up demanding "easy" and "light" books.

This article is neither for nor against any book, or book-firm. It is neither for nor against the Board of Control, but in the interest of truth and progress. Green's History is the only substantial, well-written book the course has contained, so far as the list has come under the writer's observation. As an exception to this, "Watts on the Mind" should be named. It was a notable book about a century and a half ago, and was the work of a man who gripped his subject with the firm hold of a master. This, however, is not intended to indorse a book, which, though once good, is now left far in the wake of scientific thought and progress.

If the one substantial and well-written book offered teachers has taken so well, may we not take heart and offer them more of the same sort?

S. S. P.

It is not what we put on, but what we put in, that makes us grow. It is fashionable to put on, but it is reasonable to put in. A bank highly ornamented, gilded, furnished, but with no cash in its vaults, could do no business. A very plain building, with plenty of money, would be infinitely more beneficial. A fashionable education, all gilt and glitter, but no gold, produces nothing. Better by far the uneducated roughness of Lincoln than the *educated* emptiness of a dude.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the
State Normal School.]

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NUMBER—FIRST YEAR.

THE group five is formed by adding one to four, and as soon as this new group is named the pupil begins to look for *fives*. Very soon he makes an interesting discovery in regard to his own fingers; pussy's toes are next examined, then those of the dog, or any other familiar animal.

The habit of observation will enable the pupil to find readily flowers and leaves in fives, such as, the wild rose, pansy, violet, strawberry, raspberry, blackberry, and apple blossoms; the horse-chestnut, woodbine, and rose leaves. The perfect star fish has five arms, the sea urchin five teeth, etc.

With five squares enclose a space, then draw the outline of the figure enclosed, and give it a name. The pentagon may now be used in various ways in connection with the number lesson. The relations in five are these:—

4 cubes and 1 cube are 5 cubes.

1 cube and 4 cubes are 5 cubes.

5 one cubes are 5 cubes.

1 five cubes are 5 cubes.

In 5 cubes there are 5 one cubes.

In 5 cubes there is 1 five cubes.

In 5 cubes there is 1 three cubes and 2 cubes left over.

In 5 cubes there is 1 four cubes and 1 cube left over.

In 5 cubes there are 2 two cubes and 1 cube left over.

5 cubes less 4 cubes is 1 cube.

5 cubes less 1 cube is 4 cubes.

5 cubes less 3 cubes is 2 cubes.

5 cubes less 2 cubes is 3 cubes, etc.

It should be kept in mind constantly that the order in which these relations are stated is immaterial. Sometimes a relation of division will be stated first, at another time subtraction will occur first to the pupil. Let the child state what he sees and thinks. It will interest and aid the child greatly if he be led to "picture out" these relations. For example:—

Draw skates in pairs until you have 5 skates.

Draw flowers you have seen with five leaves.

Draw a star fish which has lost one arm.

Draw a pansy which has lost two leaves.

There are five apples in the closet; I wish to put them on plates. Draw a picture showing how many plates it will take.

There were five oranges on a tree, four were blown off by a strong wind. Draw a picture showing the tree and the oranges blown off.

A cake of yeast costs two cents; show how many cakes can be bought for five cents.

There are five wheels in a carriage shop; show how many wheels can be used in a carriage, and how many are left, etc.

QUESTIONS FOR REVIEW.

Two cents will buy how many one cent stamps?

Two boys need how many over-coats?

If I wish to put one on a plate, how many plates will I need for five oranges?

Two butterflies have how many wings? etc.

SHALL WE USE SCRIPT OR PRINT?

THIS question always confronts the primary teacher in beginning to teach reading:—Shall I use Script or Print from the beginning? Many decide to use script and base their decision on reasons which seem to be valid. The reasons in its favor are:

1. From the nature of the printed form, the habit acquired in producing it is an impediment to the graceful and easy production of the script form.

2. The script is more easily executed, and, because of the closer unity of the form, it gives facility.

3. The child needs the script form as a means of communication, and the print form he will never be called upon to use.

4. The use of script will re-enforce his work with that form in other lines of work.

Others adopt the use of print in beginning to teach Primary Reading, basing their judgment on reasons equally valid and perhaps truer to the aim of the beginning stage of the work.

The *aim* of this stage of work, i. e., the work preparatory to using the first reading book, is *to have the pupil master words as printed forms.* (So far as the form side is concerned.)

Then in view of the aim stated, and limiting the work to the scope of the subject-matter of reading, three reasons may be given in favor of using print:—

1. It is the form the pupil must master as a preparation for the work in the reading book.
2. It saves the time, labor, and confusion of making the transition from the script form to the print form.
3. There is ample opportunity for learning the script in his writing work and other subjects, and hence the reading work can not be held accountable for it.

But there are others who do not hold to either view, given above, but eliminate the objections to using either form alone by using both. This can be easily done without the loss of time and with very satisfactory results. Suppose you wish to teach the word *hat*.

1. Show the pupils the script word *hat*.
2. Show them the word in the dissected chart in print and have them make it.
3. Have them make the script form of the word on the board, on their slates, or on both.
4. Have them make it at their desks, with small letter cards, in print.
5. Place it, and the subsequent words taught on the board, in some reserved place, in script and print thus:—

<i>hat</i>	hat
<i>bat</i>	bat
<i>man</i>	man
<i>pen</i>	pen

NOTE.—The five points given above are an enumeration of suggestions for dealing with both forms of the word, and have no reference to the order in which the work is to be taken, nor to the steps in teaching the word.

The following reasons may be given in support of using both forms:—

1. It affords the pupil all the advantages of using the script alone.
2. It accomplishes all that is claimed for print alone.
3. It gives more training to the powers of observation and discrimination—the powers by which form is learned.
4. It is in harmony with the *aim* and *scope* of *Preparatory Reading*.

Some, however, offer the objection, that it presents too many things to the mind at once, and therefore divides the mental energy. But it seems to us that it furnishes ample means for a thorough mastery of the form.

A. R. CHARMAN.

A BOY'S CONCEPTION OF A READING LESSON.

A NEIGHBORING boy who frequently comes in to spend a leisure half-hour with us, came in this morning. Among other things we talked of his school work, and I asked:—

What grade are you in now? *Boy*. The fifth.

Will you pass, or will you obtain the opportunity of remaining in that grade another year? *B*. Oh, I will pass. I am 98.

Then your average deficit each month was $\frac{2}{7}$ of 1%, was it? *B*. I don't know. I'll pass though. I like all my studies except spelling.

How do you take that? *B*. We write them on our slates. The teacher has a list, you know, and she gives them out to us.

What do you do in the *reading*? *B*. We study it a half an hour and then read.

What do you mean by *studying* it? *B*. We read it to ourselves at the seats.

What do you try to do when you study your reading lesson? *B*. Learn it.

I mean, what points are you trying to work out? *B*. We haven't any points.

Do you not try to answer any questions as you study the lesson? *B*. There are no questions; we just read it over 'till we know it.

What do you do, then, when you go to the class? *B*. We read it to the teacher.

But what do you do before you read? *B*. We just commence to read.

You are questioned on your reading, are you not? *B.* The others raise hands sometimes.

What is that for? *B.* When we run over a period.

What do you mean by "running over a period?" *B.* Too fast.

Do they raise hands for anything else? *B.* Sometimes we leave out a word.

For anything else? *B.* No. Oh, yes, sometimes we put in a word.

Are hands raised for anything else? *B.* That is all.

Do you ever make a mistake in pronouncing a word? *B.* Sometimes.

What is done then? *B.* The teacher tells us how to say it.

She does not have you work out the pronunciation for yourself? *B.* She tells us. We don't have our dictionaries with us in the class.

There are very few points in what are called *new words*, that are not known to you if you would but think. Look at this a moment (pointing to the word *munificence*.) What is it?

B. We've never had that word.

One thing that reading is to do for you is to give you the power to decide for yourselves the pronunciation of words that are called new. They are generally well known in all points. Sometimes there is something that you can not work out by thinking, but these cases are rare. In such cases the help of the teacher or the dictionary is needed. You should try to be helped as little as possible. When one does not need help he is educated. What is the reason that you can not pronounce this word? *B.* I do not know where to accent it.

How many syllables has it? *B.* (Examining.) Four I think.

Before you come to see us again examine, if you have time, all the words of three and four syllables in your book that you do know, and see if you can think of any reason for placing the accent where it is in each case. *B.* Our teacher just tells us how to accent it or we would not get through.

What do you mean by "getting through?" *B.* Every one gets to read.

How many are in the class? *B.* Twenty-four.

And is it the aim of the teacher to have every pupil read in each lesson? *B.* Yes.

If the teacher questioned you upon the meaning, or had you to work out the pronunciation for yourselves, you would not be able to "read round"? B. That's the reason.

This, then, was his conception of a reading lesson:—

1. *A half-hour of study* with no definite aim in mind except that of noticing where the periods come so that in the succeeding exercise he would not "run over them," and of noticing words closely enough to prevent the omission of one or the insertion of a new one.

2. *A half-hour of recitation*, in which the aim is to see that every one reads, without "running over a period," or inserting or omitting a word.

If the aim of the half-hour of study were to cultivate the habit of seeming to attend to a thing while the mind is wandering, it could scarcely be adapted to it more closely.

The Rev. Edward Thring says, "Many a good, disappointed boy has been disappointed because he has been allowed to blunder on in utter inattention when he thought he was at work, and no one has ever made plain to him the difference between sitting over his books and an eager, intelligent love for a definite work to be done. *How to learn* ought sometimes to be taught, and *delusions* about work done away with. Sleep is sleep, whether the pillow be Eschylus or goose-feathers; and sitting in the most sacred chair is not study; truths lamentably lost sight of by many a meritorious teacher."

Prof. Joseph Carhart, of De Pauw University, worked out an admirable method of dealing with reading lessons under the thought relations necessarily employed by the mind. If primary teachers understood the method thoroughly, and employed it either formally or informally, the problem of the study hour in reading would be practically solved.

At one time I asked a class of primary teachers to indicate the directions that they would give a class of the second year grade if the aim were to study the thought and the language of the lesson on page 32 of McGuffey's First Reader.

Two of the answers are submitted:—

1. "What new words do you find in this lesson?"
2. What words do you find of which you do not know the meaning?
3. What thought is expressed of each person spoken of?

4. What do the words "her" and "they" stand for?
5. Write three thoughts that you get from this lesson?
6. What is alike in the words "Kate," "Mary," "James"?
7. What time of year is it?
8. What words can you not pronounce? Why?"

"By the time the child is ready to take this lesson, he will have had a sufficient number of reading lessons to make him familiar with the method by which he is to prepare it, and the class may be directed merely to study this lesson. However, in the attempt to obtain the thought of the lesson, such questions as the following may be placed on the board:—

1. What is this lesson about?
2. At what time of year is it?
3. Where is it?
4. What is each child doing?
5. What may James have been making?
6. Write on your slates all words of which you do not know the meaning.
7. What words will help you to find the meaning?"

Of course in these directions no reference is made to the picture, and the children are not to answer by reference to the picture, as it is very evident upon reflection that any use, whatever, of the picture in obtaining the thought of a reading lesson consisting of connected sentences, tends to defeat the very aim of reading. The picture may be used to advantage to teach the meaning of a single word when dealing with isolated words before beginning to use the text book, but to use the picture as an aid in working out the meaning of a lesson in the book consisting of connected sentences always weakens the child's power to *obtain thought from language as suggested by the language itself, which is the true end of reading work.*

FIGURES IN THE FIRST YEAR.

THE question has been asked, "Why not teach the figures to first year pupils?"

1. The child of six years does not need figures to express his ideas of number. A case does not occur to me in which he may need them outside of the school-room. Of course in taking up

a book or paper he will see figures which will have no meaning whatever; but will he not also see a host of *words* which have no meaning because he does not know them? Within the school room the child's ideas of number can be expressed by drawings.

2. At this age, the knowledge of number as applied to concrete objects is of more value than the ability to write figures. A figure is a form; a form without content is of little value to the child, or indeed to any one else. But lead him to learn to examine for himself, finally to discover a numerical truth, and his power is increased for attaining other truths.

When the habits of observation and thought have been sufficiently fostered, when the child really *knows* the numbers to ten, he is ready to read and write the figures which represent these numbers. The figures will then possess some content, for example: the figure eight will represent to the child the group eight with all its relations and applications—its possibilities.

F. S. BURT.

THE SCHOOL ROOM.

[This Department is conducted by G. F. BASS, Supervising Prin. Indianapolis schools.]

QUESTIONING.

DON'T question a pupil so sharply and under such pressure as to make him feel like a witness in the hands of a shrewd lawyer. He will, like the witness, become so pressed and so nervous that he will say anything to get rid of the questioner. Question closely and logically, but don't make a pupil nervous; put him in a condition to think and give him a chance to think. Don't ask questions in a complaining tone or with the air of I-guess-you-can't-answer-that, and then seem disappointed because he does answer it.

"FOR ME."

TEACHERS sometimes make a mistake by putting things in a way that makes pupils feel that what they are doing is for the special accommodation of the teacher. This works pretty well

as long as they have a great desire to please the teacher. The human being, however, has a selfish vein somewhere, and finally gets tired doing things for somebody else. He wishes to do something for himself. So the teacher should not constantly say—"Who will do this example for me?" "Please read that again for me." This, however, is better than to tell him to read again, or keep him in at close of school without seeing that he knows why, or pass to the door and come in again. Teachers often assume that pupils know more than they do.

It is better to say "Come boys" than "Go boys." If the teacher says, "Let us try this staff again; we gave the last tone only one beat when it should have three," all have the same object in view and all strive to reach it. Work *with* the pupils and have them work *with* us and not *for* us. Unity of purpose is what we wish in school.

"NOT IN THE BOOK."

In language work, both in primary and in grammar grades, teachers usually require sentences for illustration that are not found in the book. Judging from what has frequently been heard in the recitations they get what they ask for. For example we have heard such as follows:—

"The boy is sick." We are sorry to hear it. What boy do you mean?

"The mule kicks." As a general truth no one can be found who doubts it, in the least.

"A horse is an animal." Yes, so he is.

"John struck Susan." He should not have done it. John Who?

"The dog that was sick died." Sick dogs and boys, kicking mules and horses that are animals, seem to be uppermost in the minds of our embryo linguists.

Such sentences should not be accepted as illustrations. The pupils should be taught to *use* the knowledge they have. We'll guarantee that not one of the above sentences expressed a truth present in the mind of the pupil who wrote the sentence. Pupils who have studied geography and history, and who read the daily

papers, and live in a civilized country ought to give better sentences than these. Why not say, "A boy can be brave," instead of "The boy is sick?" It is just as easy to say New York is the largest city on this continent, as it is to say that a horse is an animal. "Gas flows rapidly from some Indiana wells," is certainly as good as "A mule kicks"; and it satisfies the grammar just as well. Insist on pupils telling something worth telling when they prepare their illustrations "not in the book."

ANALYSIS.

A SOLD his watch for $\frac{3}{4}$ more than cost and received \$200 for it. Would he have gained or lost and what per cent. by selling it for \$150?

Many pupils start out by saying $\frac{4}{4} + \frac{1}{4} = \frac{5}{4}$. Upon questioning them, it is often found that they do not know what they mean by $\frac{4}{4}$, $\frac{1}{4}$, or $\frac{5}{4}$. Four-fourths of what? One-fourth of what? Five-fourths of what? They can not tell, and look at the question wonderingly. Of course the *teacher* knows that $\frac{4}{4}$ means all, or once the cost; and that $\frac{5}{4}$ means the watch was sold for $\frac{5}{4}$ of the cost. The pupils do not see this. They *should* see that if the watch was sold for $\frac{1}{4}$ of the cost more than the cost, that it was sold for once the cost plus $\frac{1}{4}$ the cost, which is $\frac{5}{4}$ the cost. They should first *see* this, then they should *say* it.

It is not, now, sufficient to say that \$200 is $\frac{5}{4}$ unless we *know* that they think what it is $\frac{5}{4}$ of. \$200 is $\frac{5}{4}$ of the cost. $\frac{1}{5}$ of \$200, \$40, is $\frac{1}{4}$ of the cost. This care will prevent the confusion often produced by such an expression as this: " $\frac{1}{4}$ is $\frac{1}{5}$ of \$200." Pupils may say, and the writer has *heard* them say, "I can not see how $\frac{1}{4}$ of anything is $\frac{1}{5}$ of it."

4 times \$40 is \$160, the cost. \$160, cost — \$150, supposed selling price, = \$10, loss. $\$10 = \frac{1}{16}$ of \$160. $\frac{1}{16}$ of a number is $6\frac{1}{4}\%$ of it, loss per cent.

Insist on the pupils understanding what they say. Accept nothing as a mere form. It is not necessary to *say* it *all* every time, perhaps, but it is necessary to *think* it *every time*.

Natural gas booms and gushers stiffen the spinal column.

GRAMMAR.

THERE comes a time when a great deal may be gained by the proper study of grammar. A proper study of this subject will tend to cultivate the pupils' reasoning powers. They must be able to understand the meaning of the sentence—of each phrase and word of it. They must understand the general truths and make special application of them. *Children* are not able to do this in grammar.

The practice of *guessing* and following it with a "because" is *not* the "proper study" of grammar. For example the following sentence is presented to a class: "The turbid torrent roared." A pupil says, "The verb is in the active voice, because it shows that the subject names the action." This sounds well. It is, however, just what could be said of any verb in the active voice. He is asked for the definition of voice. (Why?) He gives it in the exact words of the book—no harm in that if he understands them. He said, "The active voice shows that the subject names the actor." Then the teacher said, "Does the subject of your verb name the actor?" Of course the pupil said "yes" without thinking. The question was a wrong one, for the subject does name the actor; so the pupil was no nearer the truth than before. The pupil was then asked what kind of verbs have voice. He had forgotten, and so he made a guess and unluckily missed.

This pupil evidently had never grasped the idea of voice. He was not doing intelligent work. Yet he was capable, as was shown by what followed.

Tr. Did the torrent *roar* anything? Pu. No.

Tr. Was there, then, an actor and a thing acted upon?

Pu. No.

Tr. Only verbs that show that there was an actor and a thing acted upon, can have voice. What do we call such verbs?

Pu. Transitive.

Tr. Now what will you say of your verb?

Pu. It is intransitive and therefore has no voice.

Tr. What is the first question you should ask yourself when you wish to dispose of a verb as to voice?

Pu. Is it transitive or intransitive?

Tr. Suppose you decide transitive, what do you next look for?

Pu. For its subject, and see whether it names the actor or the thing acted upon.

Thus, with a few more questions than indicated above, was a dull pupil led to see how to determine the voice of a verb. He was shown how to use his own powers, which should be the main thing kept in view in all teaching.

It is not absolutely certain that a pupil understands the subject when he gives a *because* for all his statements. He may say that the verb is in the active voice because it shows that the subject names the actor and have no idea of whether the verb expresses action or of what its subject is. The writer has known pupils to make the above statement about *is*, and has then asked for its subject, when the pupil failed to give it, showing plainly that he could not have had the thoughts about that particular verb that his "because" expressed. He had not even thought whether his verb expressed action—much less whether there was something acted upon.

Teachers should see to it that the pupils make a special application of the general truth. For example, "The storm drove the vessel against a rock." The pupil should *see* and *say*, "The transitive verb *drove* shows that the subject *storm* names the thing that performed the act of driving, and is, therefore, in the active voice." This statement will not fit *every* verb in the active voice. It is the application of a general truth to a particular instance.

OPENING EXERCISE.

"One soweth, and another reapeth."—JOHN IV: 37.

Surely, one man soweth
While another reaps;
And the mother waketh
While the baby sleeps.

Each one finds a harvest
Which he never sowed,
Each one bearing burdens
Lifts another's load.

Every one is reaper
From some distant seed,
Every one is sower
For another's need.

This is law and gospel :
Sweet it is to find,
When the sowers perish,
Reapers come behind.

Praise the God of harvest,
What is wrought in tears
Brings some one blessings
In the mystic years.

Praise the God of harvest
That *another* reaps,
So the labor fails not,
When the sower sleeps.

Rev. B. R. Bulkeley.

It has been said that he who plants a tree is a philanthropist. *He* will scarcely live to enjoy it. He plants it for those who are to come after him. "One soweth, and another reapeth." Let us remember that what we reap was sown by another. Let every one be careful to sow good seed, that others may reap a harvest of good things. This will make the world better and happier. "Do unto others as ye would that others should do unto you."

EDITORIAL.

*Don't send us 5-ct. and 10-ct. stamps. We can't use them.
When you send money for unpaid subscriptions, please name the agent with whom you subscribed.*

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another; we can't do it. We will change as often as asked to do so, but must be notified of each change.

EQUAL PAY FOR EQUAL WORK.—In Chicago the minimum pay for male assistants in the high school is \$1500 and the maximum is \$2000, while for female assistants the maximum is fixed at \$1200. The Journal has always been an advocate of equal pay for equal work. Common sense and common justice demand that when a woman does as much work and as efficient work as a man, she should have equal pay with him. A school board or a school trustee that discriminates in salaries simply on the ground of sex should be deposed. Indianapolis is perhaps the only large city in the country that is run absolutely on the equal-pay-for-equal-work plan—for which it deserves special credit.

THE SUMMER NORMAL.

The Summer Normal has become a fixed institution of this country. Every state has them, and in some states almost every county. They are an excellent institution, in that they afford opportunities for review and study to teachers near their homes and at small cost. Thus hundreds, every summer, spend from four to eight weeks in study and preparation for school work, who could not or would not be at the expense of going a long distance to a well organized normal school. Besides many can attend school in the summer who can not *afford* to relinquish work at any other season of the year. These schools afford excellent opportunities to teachers to review their studies, and especially to pursue specialties.

The Journal heartily endorses the "summer normal," but has a few words of caution. It would say to young teachers: (1) Do not, for a moment, imagine that short review terms and learning a few patent methods will take the place of a regular course of study in which subjects are mastered. The "question-book" method, and the "review-term" method, have their place and their use, but when substituted for consecutive and methodical work become a crying evil. Use these methods when necessary, but do not be used by them. (2) When the "summer normal" in your own county is conducted by incompetent persons on the "Cheap John" style, you had better spend a little more money for traveling expenses and attend a *good* school.

THE NATIONAL EDUCATIONAL ASSOCIATION.

On the 12th of July the National Convention of Teachers will meet in Chicago for the transaction of the important business which comes annually before the organized educators of the country. They could not have chosen a more suitable time or place for their meeting.

Chicago is the great city of conventions, popular alike with those who have and those who have not visited it. The latter want to see the great metropolis of the West, and the former want to renew their acquaintance with it. The summer climate here is delightful; there are miles of beautiful boulevard for driving; unsurpassed hotels; and delightful rides to be taken on the lake. There is much here to gratify, instruct and enlarge the mind of the plodding, hard-worked teacher.

The National Council will convene July 8th and continue in session till the Association proper convenes on the 12th. The programs of the *ten* different departments are all filled with live topics to be discussed by able men.

CHICAGO is preparing for an attendance of 15,000, and counts on Indiana for 500. Indiana will do its duty.

RAILROADS.—All the leading lines will sell round-trip tickets from their principal stations to Chicago, and return, for fare one way, plus \$2.00 for a membership coupon. Holders of these tickets must surrender to the Treasurer of the National Educational Association in Chicago, July 12–16, the coupon from such round-trip ticket, and have the return portion stamped by the Secretary, James H. Canfield, to make it valid for the return trip. The surrendered coupon will entitle the holder of the ticket to a membership certificate in the Educational Association for 1887.

Life members purchasing the above ticket will have the membership fee returned to them by the Treasurer of the Association.

Tickets are good going from July 5 to July 13, inclusive; and good returning from July 15 to September 10.

EXCURSIONS at reduced rates are planned in various directions from Chicago.

HOTELS.—Reduced rates have been secured at all the principal hotels, including those kept on the European plan. Prices range from \$2.00 to \$3.00 per day at the principal hotels, and some regular hotels and boarding houses will entertain at \$1 to \$1.50 a day. The European hotels will charge for rooms from 50 cts. to \$1.50 a day.

INDIANA HEADQUARTERS.—In order that the Indiana delegation might be together and have the best time possible the Hotel Brevort has been secured as the headquarters. This hotel is kept on the European plan, but those who prefer can be entertained on the American plan. It has just been closed for three months and thoroughly renovated, re-fitted, and re-furnished. The price of rooms to teachers, when two occupy a room, is 75 cts. a day; a room alone is \$1 a day. A first-class restaurant is connected with the hotel, which will furnish regular meals at \$1.50 a day, or by special order as per printed rates. By this arrangement teachers who wish can reduce the cost of living to a low rate. The hotel is furnished with an elevator and all the modern conveniences and is well kept. The proprietors give the use of a club room, with a seating capacity of 200, and a large parlor *free*. It is situated at 143 E. Madison St., only five blocks from the Exposition building, where the Association is to be held.

To engage rooms in advance, which is a good plan, write to the proprietors. For further information in regard to other hotels and boarding houses, address B. L. Dodge, Room 57 Court House, Chicago.

Independent of the Association, a trip to Chicago will well repay any teacher.

RUSHVILLE.—The schools this year, under the supervision of E. H. Butler, have done remarkably well. The enrollment has been large, the attendance good, the order commendable, and the instruction up to a high standard—13 high school graduates.

GEMS OF THOUGHT.

Moments make the year; and trifles life.—*Young*.

No wrong by wrong is righted, no pain is cured by pain.—*Whittier*.

Truth is the most powerful thing in the world, since fiction can only please us by its resemblance to it.—*Shaftsbury*.

Think for thyself—one good idea,
But known to be thine own,
Is better than a thousand gleaned
From fields by others sown.

—*Wilson*.

Count that day lost whose low descending sun,
Views at thy hand no worthy action done.—*Jameson Bobart*.

Do all the good you can,
In all the ways you can,
To all the people you can,
Just as long as you can.

We live in deeds, not years; in thoughts, not breaths; in feelings, not in figures on a dial. We should count time by heart-beats. He most lives who thinks most, feels the noblest, acts the best.—*Bailey*.

When we are out of sympathy with the young, then I think our work in this world is over.—*George McDonald*.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR APRIL.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

READING.—1. What is meant by the expression, "reading between the lines?" At what age would you expect pupils to acquire it?

2. At what age would you require pupils to memorize selections? Should they be able to comprehend all of the selections? Why, or why not?

3. Give the preparation necessary for a Second Reader pupil. How would you ascertain the preparation?

4. Name *five* American poets, *two* historians, *two* novelists, *one* political writer, and name the best known work of each.

5. What is the value of supplementary reading in the district school? How may it be corrected when tending toward the vicious literature of to-day?

GRAMMAR.—1. What is inflection? What parts of speech are inflected? Name their inflections.

2. Analyze: "Why is a mixed diet better than a plain one?"

8. Write a sentence containing *it* used as an expletive. As a pronoun in the nominative case by apposition. As a subject. As the object of a verb. As an explanatory modifier of the object.

4. Correct and give reasons:

1. We heard of him coming.

2. It was him and not me that did it.

3. I knowed it was him.

4. Why do you treat me so, I who have always been your friend?

5. He laid down and took a nap.

5. Give the principal parts of the verbs *see*, *saw*, *lie*, *set* and *know*, and use the past participle of each correctly in a sentence.

6. Diagram: "The injuries we do, and those we suffer, are seldom, if ever, weighed in the same balance."

7. "We must not hope to be gleaners,
And gather the ripe, golden ears,
Till we have first been sowers,
And watered the furrows with tears."

Parse all the nouns.

8. Write the possessive, singular, and plural of *mouse*, *ox*, *Jones*, *man*, *mother-in-law*, *5*, *1*, *money*, *Albany*, *history*.

9. At what age would you recommend the study of technical grammar? Why?

10. (a) Give all the infinitives of the verbs *strike*, *see*, and *do*.

(b) Use the first infinitive of each as follows:

a. As a subject.

b. As an object.

c. Independently.

PHYSIOLOGY.—1. What influence has the mind upon *beneficial* physical exercise?

2. Why is play more useful in developing the muscles of children than work?

3. What is a sprain? A strain? An organ? A function? A tissue?

4. Name the several tissues of the body and the property of each.

5. Describe fully the process of digestion.

6. Trace a drop of blood from the right auricle through the system till a "circuit" is complete.

7. Give hygiene of the teeth.

8. Why do we need frequent change of clothing?

9. Give the philosophy of a "cold."

10. What is dislocation? Give treatment.

HISTORY.—1. Name the two typical English colonies and give date of settlement of each.

2. State the characteristics of the people in each of these two colonies and the influence upon our subsequent history.

3. Write a brief, concise account of the "Alabama." What were the "Alabama Claims."
4. What effect did the annexation of Texas have upon the institution of slavery—(a *complete* answer)?
5. Write the history of Fulton's steamboat.
6. Name the three greatest American inventions, the inventors, and give a brief account of each invention.
7. Name the political parties in power from Washington to Cleveland.
8. Who was Blennerhasset?
9. What faculty of the mind enters largely into the *proper* study and knowledge of history? What is history?
10. Why should history be taught in our public schools?

GEOGRAPHY.—1. What States compose the German Empire? Bound it. Name its ruler. What national event has just occurred in that empire?

2. What causes the trade winds? What is their direction. To what due?
3. Name the five great powers of Europe. Give the form of government and chief products of each.
4. What is evaporation? Condensation? Name the several kinds of the latter. Define each kind.
5. Name the largest five States in the United States as to area. The largest five cities.
6. What is the character of the Atlantic coast of the United States? Of the Pacific?
7. Name the two States in the United States leading in producing corn, wheat, cotton, tobacco, salt.
8. What is a water-shed? A basin? A river system? Locate the great water-shed of North America.
9. Give political and social reasons for the great immigration into this country.
10. Give the capital of Greece; Switzerland; Algiers; Austria; Ontario; Louisiana; West Virginia; Dakota; Holland, and Egypt. *Locate each.*

Answer any seven of the list. Fifteen percent off for each one incorrectly answered.

ARITHMETIC.—1. What are the fundamental branches in arithmetic? What is a principle in arithmetic? *Illustrate.*

2. A farmer's house cost two-thirds as much as his farm, and his farm four times as much as his stock. What was the entire cost of all, if 50% of the cost of the house equals \$1,500?
3. By selling an article for \$5 less than its value I lose $\frac{1}{8}\%$. Had I sold it for \$6 more than I did, what per cent. would I have gained?
4. 14 lbs. 10 oz. 16 pwt. is $33\frac{1}{2}\%$ more than what quantity?
5. \$56 is $\frac{7}{8}$ of what B gained by selling his watch for 32% more than cost; what was the cost?
6. What is discount? True discount? Bank discount? *Illustrate by a problem the difference between true and bank discount, and show the difference in principle.*

7. Mr. Smith sold his watch for \$140, thereby cleared one-fifth of this money; what per cent. would he have gained* by selling it for \$128?

8. A lady purchased a carpet $\frac{5}{8}$ of a yard wide, at \$1.75 per linear yard, to cover a room 22 feet long. The cost of the carpet was \$106.08 $\frac{3}{4}$. What was the width of the room?

9. The perimeter of a field is 400 rods, and it is 40 rods longer than it is wide. How many acres does it contain, and what will it cost to fence it at \$1.82 $\frac{1}{2}$ a rod?

10. In a school-room $\frac{2}{3}$ of the desks are occupied; $\frac{1}{3}$ of the scholars study grammar; $\frac{1}{4}$ study physiology; $\frac{1}{4}$ study history, and the remaining scholars are equally divided into *three* algebra classes. $\frac{1}{2}$ of the most advanced algebra class study geometry, and there are *five* in the geometry class. What is the number of scholars in the school-room, and how many desks not occupied?

NOTE.—Applicants may answer *seven* out of the list; 6 and 10 must not be omitted. Deduct 15% for each problem incorrectly solved.

SCIENCE OF TEACHING.—1. Why should a principle or a definition be understood before it is committed to memory? *Give no credit for partial answer.*

2. What is the difference between education and information? What is teaching?

3. What is meant by "learning by rote?" Is it useful or harmful to the child? Why, or why not?

4. What is meant by teaching a *rule* inductively? Illustrate.

5. What is a habit? Why so difficult to overcome?

6. Why are we called "Creatures of habit, rather than of impulse"?

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. Virginia, settled in 1607; Massachusetts, in 1620.

2. The people of Virginia, other than the few who governed, at the early settlement, were of two classes, the upper, who had not worked, and did not desire to work, but came to the colony in the hopes of growing rich without that labor, or on the labor of others; the other class were refugees from justice, either voluntary or forced, who disliked honest labor even more than the others. These characteristics have marked their descendants both in Virginia and in other colonies and states for generations, and their effects have been apparent throughout the history of the country. On the other hand, the people of Massachusetts were accustomed to labor, regarding it as honorable; they had ideas concerning human rights which they hoped to exercise and propagate in the new colony, and with the earnestness of such men impressed themselves, often unpleasantly, upon all with whom they came in contact. The continual contention of these characteristics has gone far to mould the history of the country as amongst the most powerful and natural influences upon that history.

3. Early in the Civil War, Great Britain and other foreign nations recognized the Confederate States as belligerents, giving the right of harbor in their ports to southern cruisers. Southern agents built in England two vessels, the Alabama and the Florida, to serve as cruisers, harassing the Union commerce and vessels. The Alabama, under command of Capt. Semmes, obtained a world-wide notoriety, giving its name to the whole class of depredations, and to the claims of the United States for these depredations. In all conflicts with our vessels, these cruisers, when worsted, ran into ports under British protection, creating the impression that Great Britain was conniving at the destruction of the commerce of a friendly power. In 1864 the Alabama, manned by English gunners, ran into Cherbourg where she was watched by the Kearsarge. Leaving Cherbourg, when seven nautical miles from there she was engaged by the Kearsarge, and after a hard fought battle sunk, her commander being picked up by an English vessel and carried to England. The United States claimed damages from Great Britain for the destruction of property by the Alabama and Florida, and other cruisers built in the British seas. The question was submitted to arbitrators, who met at Geneva, Switzerland, and after a full examination of all the questions awarded the United States \$15,000,000 damages, which were paid by Great Britain.

4. The primary effect of the annexation of Texas was the enlargement of the slave territory, which was the principal object of Calhoun, but not that of Benton and other Western men who were more desirous of overcoming the preponderating weight of the East in the government. The secondary effect of the annexation was the most determined efforts of the North to overcome the control of the government in favor of slavery, which the South had actually gained by the measure. The antagonism of the two sections on the slavery question became bitter and uncompromising upon the part of the extremists, but moderate men were successful for a time in warding off the final conflict which came in the Civil War; the result of the conflict being the abolition of slavery in the whole country. The forcible carrying of slavery into territory where by law it had been excluded was in reality the worst move ever made in that cause by its friends, and led to the alienation of many of the supporters of the institution in the Great West.

5. For many years after the discovery and utilization of steam power by Watt many ineffectual attempts had been made to apply it to water navigation, amongst others that of John Fitch, who built and for a short time run a small steamboat on the Delaware. Finally Robert Fulton, in 1807, succeeded in building the Clermont, with which he made the trip from New York to Albany, 150 miles in 32 hours. So completely did this successful experiment revolutionize the whole system of water navigation, as to lead to the rapid settlement of the great

West, the first steamboat on the western waters having been built at Pittsburgh in 1811. The ocean was successfully crossed by a steam vessel in 1819, but the success was not followed up for many years.

6. *a.* The Cotton Gin, invented by Eli Whitney. This invention, by enabling a man to clean 1000 lbs. of cotton where before he could clean only 5 or 6, made cotton raising the most important industry of the South and made slavery the great interest of that section. *b.* The Electro-Magnetic Telegraph, invented by S. F. B. Morse, has revolutionized the inter-communication of states and nations, putting all in knowledge of events, wherever happening, almost simultaneously. *c.* The Reaper and Mower, brought to perfection by McCormick, has made the cultivation of square miles almost as easy and more valuable than that of acres in earlier times.

7. At the adoption of the Constitution there was but one party, the Federalist, which continued the ruling party under Washington and John Adams; then the Republican, or Democratic party, came into power under Jefferson, Madison, and Monroe. During Monroe's second term there was but one party, that then in power. In the "scrub race" for the presidency, which resulted in the election of Adams, the Whig party came into the ascendancy, but was replaced in four years by the Democratic party, in the election of Jackson, that party retaining its supremacy through the terms of Jackson and Van Buren, when the Whig party came up in the election of Harrison, to be again superceded by the Democratic party in the election of Polk. This party remained in power through the administration of Polk to be again defeated in the election of Taylor by the Whigs. In 1852, at the election of Pierce, the Democrats were again successful, holding power through the administrations of Pierce and Buchanan. In 1860 the Democratic party split and the new Republican party elected Lincoln, and held the power during his terms, and those of Johnson, Grant, Hayes, Garfield, and Arthur, when the Democrats, by the election of Cleveland, came again to the government.

8. Blennerhasset was an Irish gentleman who came to this country at the beginning of the century, when he purchased an island in the Ohio River below Parkersburg, Va., which he made a perfect earthly paradise, where he lived with his family in the exercise of almost royal hospitality. Becoming interested in the schemes of Burr, but without a real knowledge of their object, he lost all his property and was tried for treason, but acquitted through the efforts of his counsel, William Wirt.

9. The reason. True history is the record of events in the civilized world, set forth in such a manner as to show the connection of the events with their natural antecedents, modified by the inter-current causes, personal and others, and also the necessary and actual results of those events under influence of the same causes.

10. The foregoing statement of what history is, and the necessity of a full knowledge of it to the fitting of the rising generation for their duties, social, civil, and political, indicates the soundest reason for prosecuting its study in the public schools.

SCIENCE OF TEACHING.—1. Because if it is not understood, the pupil is committing language that means nothing to him: calls up no proper concepts.

2. *Information* means only a knowledge of facts, while *education* implies a power to use the facts. Teaching is supplying the conditions that cause the mind to acquire power to get, retain and use information.

3. Learning the exact words of the book, paying little or no attention to the meaning. Generally harmful because the child forms the habit of learning words that mean nothing to him.

4. Beginning with individual facts and by induction reaching the general. Illustration: Rule for 6% method of computing interest. The pupil is led to see the following truths: The interest for 1 year is .06 of the principal; the interest for 1 month is .005 of principal; for 1 day, .000 $\frac{1}{2}$ of the principal. From these individual truths by induction he gets the following rule: Take as many times .06 as there are years, and as many times .005 as there are months, and as many times $\frac{1}{2}$ of a thousandth as there are days, and multiply the principal by the resulting decimal.

5. What has been done often enough to be performed without an act of the will. Because the mind tends to act as it has acted before, and because the tendency grows stronger at each repetition.

6. Because habit is stronger than impulse. We are more likely to do what we are in the habit of doing, than we are to do what is suggested by a mere impulse.

PHYSIOLOGY.—1. The mind has much influence in determining whether exercise of any sort shall be beneficial, as a feeling of repugnance, opposition, indifference or weariness tends to take from the exercise all its value. Exercise must be under pleasing, exhilarating, hopeful conditions to be of most value.

2. Because mind and body are in harmony and working to a common end, each reacting upon the other.

3. (a) A severe wrenching given to ligaments tending to break or loosen them; (b) such unusual work required of a motor organ as tends to produce a sprain; (c) one of the portions of the body having a distinct work to perform; (d) the work which an organ is designed to do; (e) one of the elements which form an organ.

4. Muscular, etc., to produce motion; nervous, to receive and transmit impressions, to originate and transmit motion, thought, feeling, etc.; nutritive, to see to the repair and waste of the body; supporting,

to maintain the form, facilitate action, etc.; storage, to retain nutritive materials not immediately needed; undifferentiated, to repair damage caused by injury, disease, etc.

5. Digestion consists in taking food, separating it into portions easily acted upon by the digestive juices, mixing it with saliva, mucous, gastric juice, the pancreatic, bilious and intestinal juices, and by the changes produced by chemical action and churning, preparing it for absorption and use by the body.

6. Right auricle, right ventricle, pulmonary artery, lungs, pulmonary veins, left auricle, left ventricle, great aorta, various arteries, capillaries, various veins, ascending and descending vena cava, right auricle. Meantime it has taken two special secondary trips—to the kidneys and to the liver.

7. Keep them clean and use them carefully.

8. Because of the waste passing off through the skin.

9. A cold is a chill received by the external skin and transmitted to the internal skin.

10. The displacement of a bone. Treatment by a novice is not wise, but the things to be done are: find the direction of the displacement at once, put a temporary strain upon the muscles and ligaments, push back into place, secure rest and retard inflammation.

READING.—1. (a) Ascertaining the thought or feeling expressed in the selection read. (b) Pupils may begin this as soon as they have fairly well mastered the mechanism of reading.

2. (a) As soon as they can be induced to do so. It is a valuable exercise for the memory, and seeds are frequently thus planted which afterward germinate into a rich fruitage. (b) No, because something should be left for thought and reflection, and the language is itself of value.

3. This depends upon the condition and previous training of the pupil (if reference is had in the question to each day's work). If the pupil has gotten over the serious task of learning *how to read*, in its elementary difficulties, and can add, subtract, multiply and divide in the simplest forms, it may be regarded as prepared to take up the 2d Reader work, or grade. The text-book in which it has been learning to read can not be taken as a test of its power over words.

4. (a) Edgar A. Poe, "The Raven"; Wm. Cullen Bryant, "Thanatopsis"; John Greenleaf Whittier, "Snow-Bound"; Henry Wadsworth Longfellow, "The Psalm of Life"; Fitz Greene Halleck, "Marco Bozzaris." (b) George Bancroft, "History of the U. States"; W. H. Prescott, "The Conquest of Mexico." (c) J. F. Cooper, "The Last of the Mohicans"; Nathaniel Hawthorne, "The Scarlet Letter." (d) Henry Wilson, "Rise of the Slave Power in America."

5. (a) It is a test of the pupil's power over words and thought, it gives freshness and zest to the recitation, it furnishes the means of

gradually cultivating a taste for good literature, etc. (b) By carefulness in selecting the supplementary literature, by interesting pupils in good writers through the opening exercises, by supplanting the evil with the good.

GRAMMAR.—1. Inflection is the change in the form of a word, depending upon its use in the sentence. Conjunctions, prepositions, and interjections are not inflected. Nouns and pronouns have gender, person, number, and case. Verbs have voice, mode, tense, person, and number. Adjectives and adverbs have comparison.

2. This is a complex interrogative sentence, of which "a mixed diet" is the logical subject, and *diet* the subject nom. modified by *a* and *mixed*: "is better than a plain one" is the logical predicate, *is* is the copula combined with the predicate adjective *better*, and *is better* is modified by the abridged subordinate clause "than a plain one (is)." The sentence is introduced by the interrogative adverb *Why*, and *than* is the connective of the subordinate clause.

3.
 - a. *It* is not well with me to-day.
 - b. The pronoun *it* is composed of two letters.
 - c. *It* was I that struck the fatal blow.
 - d. I heard *it*, and knew what it meant.
 - e. Parse the pronoun *it*.
4.
 - a. We heard of his coming.
 - b. It was he and not I that did it.
 - c. I knew it was he.
 - d. Why do you treat me so—me who have always been your friend?
 - e. He lay down and took a nap.
5. See, saw, seen; saw, sawed, sawed or sawn; lie, lay, lain; set, set, set; know, knew, known.
 1. A circle was *seen* around the moon.
 2. The man had *sawed* wood for ten years.
 3. How long he had *lain* there, no one knows.
 4. A city that is *set* on a hill can not be hid.
 5. I have *known* the man for years.
7. *Gleaners* is a noun, common, third, plural, common gender, and in the nominative case, predicated of *we*. *Ears* is the object of the infinitive (to) gather. *Sowers* is the predicate nominative after *have been*. *Furrows* is the object of *have watered*, and *tears*, the object of the preposition *with*.
8. Mouse's, mice's; ox's, oxen's; Jones's, Joneses'; man's, men's; mother-in-law's, mother's-in-law; money's, moneys'; Albany's, Albanies'; history's, histories'; the possessive of *t* and *s* is expressed by the use of the word *of*.
10. To strike, to have struck, to be struck, to have been struck. To see, to have seen, to be seen, to have been seen. To do, to have done, to be done, to have been done.
 1. To *strike* is a present infinitive.
 2. The boy tried *to strike* the ball.

3. *To strike* for higher wages! Ah! what suffering it often causes.
1. *To see* our faults as others see them, is not an easy thing to do.
2. People like *to see* the show come in.
3. *To see*! How much of wonder is implied in that one word.
1. *To know* is the desire of all men.
2. All men desire *to know* truth.
3. To know! all men desire to know.

GEOGRAPHY.—1. The German Empire is composed of twenty-six States, viz: Prussia, Saxony, Bavaria, Wurtemberg, Baden, Hesse, Mecklenburg-Schwerin, Mecklenburg-Strelitz, Oldenburg, Saxe-Weimar, Saxe-Meiningen, Saxe-Altenburg, Saxe-Coburg-Gotha, Brunswick, Anhalt, Reuss-Greiz, Reuss-Schleiz, Schwarzburg, Rudolstadt, Schwarzburg-Sondershausen, Schaumburg-Sippe, Lippe-Detmold, Waldeck, Bremen, Hamburg, Lubeck, Alsace-Lorraine. It is bounded on the north by the North Sea, Denmark, and the Baltic; on the east, by Russia; south, by the Austro-Hungarian Monarchy and Switzerland; west, by France, Belgium, and Holland. The ruler is Kaiser Wilhelm I, whose ninetieth birth-day was recently celebrated.

2. The heat of the sun produces ascending currents of air in the torrid zone, when other air flows in below to fill the space. As these currents pass towards the torrid zone the revolution of the earth on its axis causes them to turn towards the west. Between the parallels of 30° north and south latitude, they always blow from an easterly direction and are there called trade-winds.

3. (1) Great Britain. A constitutional hereditary monarchy. The chief products, coal, iron, tin, and manufactured goods; flax and hardy grains. (2) France—a republic; cereals, beet-root, tobacco, the vine, olives and other fruits, silk. (3) Germany—an empire; grain, flax, hemp, maize, the vine, and orchard-fruits; coal, iron, zinc, copper and lead. (4) Russia—an empire; wheat and other grains, hemp and flax, horses, cattle, sheep, and goats. (5) Austro-Hungarian Monarchy—an empire; grain, flax, the vine, wool, live-stock, salt, iron, copper, lead, gold, silver, and quick-silver.

4. Evaporation is the slow production of vapor from the surface of a liquid. When a body in a state of vapor, by losing a portion of its heat, passes into a liquid state, the process is called condensation. Dew, fog, clouds, and frost are forms of condensation.

5. (a) Texas, California, Colorado, Nebraska, Oregon. (b) New York, Philadelphia, Brooklyn, Chicago, St. Louis.

6. The Atlantic coast of the United States is irregular, with frequent indentations. North of Cape Cod it is high and rocky; south, it is low and sandy. The Pacific coast has few indentations and is bordered by mountains.

7. (a) Illinois, Ohio. (b) Illinois, Indiana. (c) Mississippi, Alabama. (d) Kentucky, Virginia. (e) New York, Michigan.

8. A water-shed is the higher land separating adjacent river-basins. The entire tract of country drained by a river and all its tributaries is called its basin. The great river with all its tributaries form a river system.

10. (a) Athens; (b) Berne; (c) Algiers; (d) Vienna; (e) Toronto; (f) Baton Rouge; (g) Charleston; (h) Yankton; (i) The Hague; (j) Cairo.

ARITHMETIC.—I. Notation, numeration, addition, subtraction, multiplication and division. A truth upon which a process is based. Profit and loss are computed upon cost.

2. $\$1500 = 50\%$ or $\frac{1}{2}$ cost of house.
 $\$1500 \times 2 = \3000 , cost of house.
 $\$3000 = \frac{2}{3}$ cost of farm.
 $\$1500 \times 3 = \4500 , cost of farm.
 $\$4500 \div 4 = \1125 , cost of stock.
 $\$3000 + \$4500 + \$1125 = \8625 , whole cost.

3. $\$5 = \frac{1}{8}\%$ or $\frac{1}{800}$ of cost.
 $\$5 \times 800 = \4000 , cost of the article.
 $\$5$ less than cost + $\$6 = \1 more than cost.
 $\$1 = \frac{1}{400}$ of $\$4000$, or $\frac{1}{40}\%$.

4. 14 lb 10 oz. 16 pwt. = $\frac{1}{3}$ of the quantity.
 $\frac{14 \text{ lb } 10 \text{ oz. } 16 \text{ pwt.}}{3} = 11 \text{ lb } 2 \text{ oz. } 2 \text{ pwt.}$

5. $\$56 = \frac{7}{8}$ of gain. $\$56 \times \frac{8}{7} \times 8 = \64 , gain.
 $\$64 = 32\%$ of cost. $\$56 \times \frac{100}{32} = \200 , cost.

6. For definitions see any Arithmetic. Find difference between the bank discount and the true discount of \$100 for 90 days at 6%.

$$\begin{aligned} \$100 \times .0155 &= \$1.55, \text{ bank discount.} \\ \$100 \div \$1.015 &= \$98.522+, \text{ present worth.} \\ \$100 - \$98.522+ &= \$1.478, \text{ true discount.} \end{aligned}$$

The bank discount is 6% per annum of the face of the note, while the true discount is 6% per annum of the present worth.

7. $\frac{1}{5}$ of $\$140 = \28 , gain. $\$140 - \$28 = \$112$, cost.
 $\$128 - \$112 = \$16$, gain. $\$16 = 14\frac{2}{3}\%$ of $\$128$. $14\frac{2}{3}\%$, Ans.

8. $\$106.08\frac{2}{3} \times 3 \times 5 = 15\frac{1}{2}$ ft.
 $\$1.75 \times 22 \times 8$

9. 400 rds. — 80 rds. = 320 rds.
 $320 \text{ rds.} \div 4 = 80 \text{ rds.}$

- 80 rds. + 40 rds. = 120 rds., length. 8 rds., width.
 $120 \times 120 = 60 \text{ acres. } \$1.82\frac{1}{2} \times 400 = \730 , cost of fencing.

10. 2×5 pupils = 10 pupils in most advanced algebra class.

$$\begin{aligned} 3 \times 10 \text{ pupils} &= 30 \text{ pupils in three algebra classes.} \\ \frac{1}{3} + \frac{1}{6} + \frac{1}{4} &= \frac{3}{4} \text{ of school that do not study algebra.} \\ 1 - \frac{3}{4} &= \frac{1}{4} \text{ that do study algebra.} \end{aligned}$$

$$\begin{aligned} 30 \text{ pupils} &= \frac{1}{4} \text{ of the school.} \\ \frac{1}{4} \text{ of } 30 \text{ pupils} &= 6 \text{ pupils, or } \frac{1}{4} \text{ of school.} \\ 14 \times 6 \text{ pupils} &= 84 \text{ pupils in school.} \\ 84 &= \frac{7}{8} \text{ of the seats.} \\ \frac{1}{8} \text{ of } 84 &= 12, \text{ or } \frac{1}{8} \text{ of the seats in the room.} \\ 9 \times 12 &= 108 \text{ seats in room.} \\ 108 \text{ seats} - 84 \text{ seats} &= 24 \text{ seats unoccupied.} \end{aligned}$$

READING CIRCLE DEPARTMENT.

OUTLINES FOR JUNE.

HAILMAN'S LECTURES ON EDUCATION—LECTURES X, XI, AND XII.

The Ideas of Pestalozzi.

Let us, by means of Mr. Hailman's Lectures, try to discover what Pestalozzi's central idea was, what contribution he really made to educational progress. For, unless he contributed some central idea, some underlying principle, his work is only a passing shadow on the great theater of school-education. We believe that Pestalozzi was the author of something better and more enduring than passing shadows. Rousseau had proclaimed that the secret of education lies in keeping it close to a something he called Nature. But his idea was dim and obscure. He himself did not see clearly what he meant when he was so lustily proclaiming that education must, like that society of which it is a part, be brought back to nature. Indeed his Nature was a state of the most aggravated artificiality. The only thing natural about it was its recognition of the value of nature.

Pestalozzi followed his fanciful master, as a light follows the outline of a vague object, and made a great step toward defining what Nature in education meant. He saw that to bring education back to nature, we must study the child's mind and its development. This could be done only by those who loved and sympathized with children. He made a study of them himself, and on this as a basis, framed a course of instruction. That he was an educational genius is shown by the fact that, in this new field, he accomplished results that are substantially correct. Perhaps he overestimated the educative power of the family and of the school, and underestimated the effects of society, self-development, and heredity, but these are small failures compared with his recognition of the true idea of development, of growth by exercise, and the relative value of verbal memory and thought about things. He was, so far as we know, the first educator to clearly point out that education must be a development, like that of the child outside of school.

It may not be out of place here to refer to his recognition of the principle, so often quoted and so little understood, "Go from the known, in teaching a subject, to the related unknown things." With Pestalozzi, this meant to begin with what the child knew by his common everyday experience and develop this to what lies outside of it. Has there been any improvement on this since? We think not!

Again, the scope of Pestalozzi's genius is apparent in his fast hold on the principle that one faculty can not be developed by exclusive ex-

ercise of another faculty. In this he understands the true meaning of Comenius' "Learn to do by doing." This is the doctrine of completeness in education, a doctrine we can not too fully emphasize in the face of the modern specialization and differentiation of subjects and of instruction, by which knowledge and training are broken up into numberless threads, of which the pupil runs the risk of missing the really important ones.

Any notice of Pestalozzi's ideas would be incomplete without mention of the lofty and inspiring aim he sets before education. Raumer sums up this feature in a sentence: "He compelled the scholastic world to revise the whole of their task, to reflect on the nature and destiny of man, and also on the proper way of leading him toward that destiny." Pestalozzi's destiny of man is the same as that of Hegel and Fichte: the realization of rational freedom.

FRÖBEL AND THE KINDERGARTEN.

Fröbel continues and completes, in part, the work of his master Pestalozzi. His substantial contribution to educational ideas is the Kindergarten. Fröbel noticed the gap between the primary school of his day and the home-life of the children who were pupils in those schools. To remedy this break in the continuity of culture, he devised his transition school. In it, too, he hopes to find a remedy for the deficient home-culture of those unfortunates who either have no homes, or, having homes, receive wrong training in them. It has always seemed to the writer of this article that the kindergarten, as a separate institution, is founded on the shortcomings of the family and of the primary school, and that, while the kindergarten ideas of sense and imagination—development and the combination of work and play, or, perhaps, better, work under the form of play, will live permanently, the kindergarten as a distinct school, will go down. The proper thing to do is to improve the family and the primary school, rather than found a new institution on their deficiencies.

The kindergarten has already revolutionized the primary school, by substituting methods which accord with the young child's mind, for those of old days, which were suited only to grown up children, whose minds are relatively mature. Before the kindergarten, the method of the primary school was that of the high school, youths' school, and college. It now has a method of its own, based on the nature of the minds to be educated. We now need to do the same thing for advanced education that Pestalozzi and Fröbel did for primary education, viz., to found it on the nature of the mind educated instead of on the nature of the subjects taught. All our advanced teaching now is founded on a supposed nature of the subjects taught.

Fröbel emphasized the idea that education is organic; that the action of one faculty depends on another; that, in order to produce any given result, one must know the conditions which are its invariable

antecedent; and that education is a part of life and personal experience. These ideas are even now poorly realized, although they lie at the very foundation of all development. S. S. PARR.

MENTAL SCIENCE—WATTS ON THE MIND. I, IV, VIII, X, XIII.

Review.—The five points noted below, together with their subordinates, seem to be of most importance, and to include most of the discussions had during the year on mental science. They are therefore summarized here as a review, and as an exercise fixing the thought of the book in mind.

No man, says the author, in the Introduction, is obliged to learn, or can he expect to know everything: but all are under some obligation to cultivate their understanding. While skill in the sciences is the business or profession of but a small part of mankind, and so can not be expected of all; even the lower order of men have particular callings in life wherein skill is needed, and all men as social creatures, members of family, and government, must use their reasoning powers daily; must exercise judgment as to time and things, persons and actions, and so need to learn a wise and prudent determination of affairs. Hence the need for a careful discipline of mind, and the intelligent furnishing of mind. Concerning the

“RULES FOR THE IMPROVEMENT OF KNOWLEDGE,”

therefore, may be cited as fairly characteristic, the following, somewhat generalized, but entirely within the thought of the author.

Presume not, too much, on a “bright genius,” nor think that a life of learning may be a life of indolence and ease. It is no idle thing to be a scholar.

Review in thought frequently the progress made. Call yourselves to account with the new ideas. Write much. “Let no day pass without one line at least.” Avoid at all times, the dogmatic spirit. It closes avenues of learning; it leads to arrogance, and makes one censorious. Guard against the indulgence of vicious appetites and inclinations. Sensuality ruins the better faculties. Indulgence enfeebles the reason: it makes one credulous and querulous. It warps the soul, and dims the understanding. Of

“THE METHODS OF GAINING KNOWLEDGE,”

five are named. (1) Observation; (2) Reading; (3) Lectures; (4) Conversation; (5) Study (meditation).

In observation may be included “all that Mr. Locke means by sensation and reflection”; one of the most valuable phases being experiment, or the careful varying of conditions that results may be noted methodically. To the end that observation may be made an effective means, accuracy of observation should be acquired; personal prejudice and the bias of previously formed conclusions, guarded against; and

above all, and as supplementary to all else, avoid too hasty generalizations. The same counsel is repeated here as under the previous point, "write much." Such practice gives a habit of careful thinking, it teaches economy, it secures accuracy of statement, and command of one's knowledge.

Concerning the second means—Reading—the most common-place reflections are most wise. In the course of reading work the new and striking, note other references to, or expositions of, the same subject. Use indexes and provide them for valuable books not having them. Read with the mind open to truth. Consult and use vocabularies of every sort upon all occasions.

Few parts of the text are more practical than that in which are discussed the nature of, and the rules for Conversation—the fourth method named. Waste no time in trifling. Much attention given to the mere trivialities of thought, makes one's best thought trivial. While taking care to be not forward, seek to learn from all. Gather information and inspiration from every source. Hear all speakers with politeness and tolerance. Weigh the thoughts and neither condemn nor adopt them because of their advocates. Avoid disputing. Party spirit hinders honest conviction; for then is reason hindered by prejudice.

Of the last method of gaining knowledge—Study—it is important to learn early, to distinguish words and things. Use the thought to explain the phrase, not the opposite. Hold to but few interests at once. Mind easily dissipates. Keep the eye single upon the study at hand. Have the end ever in mind. All other doing is irrational.

Finally do not expect to arrive at certainty in every matter. Life is a growth; culture is a growth. The power that comes of study follows a long process of mind—a series of attempts. Be patient to do often, and to do long. "Covet the best results." Take no discouragement at less than the best.

Concerning the Improvement of the Mind, the following only can be named, as most important facts: (1) Avoid over-crowding the mind with unrelated facts. (2) Cultivate habits of close attention to the details of what must be retained. (3) Fix information by much writing, remembering that what has been seen is less easily forgotten than what has only been heard.

A good memory is prompt, comprehensive, retentive, and accurate.

R. G. BOONE.

JACKSON TOWNSHIP, PARKE CO.

Reading Circle work in our township has not progressed as satisfactorily as we purposed. Our ten teachers took up the work earnestly in the fall of 1886, about half of them attempting to carry two years' reading at the same time, the others wisely contenting themselves with

one year's course. The former took Barnes, Brooks, Parker, Green, Watts, and Hailman; the latter class took Barnes, Brooks, and Parker. Both classes met as one and discussed these three authors. The other three were presumed to be undergoing examination at home.

The unsatisfactory progress hinted at above comes from attempting too much at once. The first three works had been studied partially, and the class, full of enthusiasm and fearing many evils from being behind time, shouldered the whole load. Really, the load was not great in itself, but we carried our schools at the same time, and the aggregation *was* a load. However, we got along pretty fairly.

Subjects were assigned by our leader about as follows: To A, Roman History; to B, Mental Perception; to C, Reading—the word, the sentence. The entire class being presumed to have studied the subjects thoroughly, were questioned methodically by A, B, or C, as per appointment. These exercises occupied a good share of institute time, and were spiritedly sustained throughout the winter.

Besides at regular institute, we met once a month at night, going, for that purpose, from two to five miles, and getting back home anywhere between 10 and 12 o'clock. Night, mud, and winter ended these meetings about Christmas.

The work done through the winter, in class, may be stated thus: Talks on Teaching, to page 88; General History, to page 310; Mental Science, The Intellect. Much more than this was done, however, in private reading. In the latter way, chiefly, were our regards given to Green, Watts, and Hailman.

It is rather late, perhaps, to say anything for or against R. C. work, but I wish to say that our teachers all appreciate its high value to them in many ways. And with this appreciation, is growing up a belief that four years of solid reading should receive a higher recognition than a credit on the science of teaching.

J. H. RICHARDSON.

INDIANA TEACHERS' READING CIRCLE.

The records in this office show the following counties leading in membership of the Reading Circle:

Sullivan.....	120	Clark.....	44
Henry.....	100	Parke.....	40
Harrison.....	87	Lawrence.....	36
St. Joseph.....	81	Wayne.....	34
Perry.....	72	Warrick.....	33
Wabash.....	62	Spencer.....	26
Clay.....	61	De Kalb.....	25

The membership in other counties reported range from 20 down to 2. Some gratifying reports come from the work of circles, and a few extracts from letters are here presented.

Supt. Wilson, of Henry county: "We devoted half of the day at each township institute to a review of the past month's reading. The results were more than satisfactory. The Reading Circle has had a wonderful influence in causing more general reading. Our booksellers say that their sales of *standard literary works* have increased 300% in the past three years. The literary reviews that I get from the applicants for license are *good*, many of them *superb*."

Supt. Thomas, of Harrison county, makes a wise assertion that all should imitate: "Our members all pay up when they join the Circle. No name is offered without the fee."

T. A. Mott, of Wayne county: "A great deal of professional reading is done outside of the Reading Circle course, but in connection with it."

Supt. Carlin, of Steuben county: "I shall send a good list of manuscripts this year. Steuben county will continue to do *better and better* in the Reading Circle work."

Supt. Anglin, of Kosciusko county: "Our teachers are making wonderful improvement in the Science of Teaching by discussing this subject in their township institutes. I am well pleased with the results."

E. S. Monroe, of Posey county: "From two to three hours of the county institute's time was devoted to the discussion of the reading. The reading was pursued systematically." Below will be found his announcement from his county paper.

"The members of the Posey County Teachers' Reading Circle will meet at the residence of Ed. Brown, Esq., on Friday evening, April 8th, 1887. Items of interest to every member will be discussed. In addition the following subjects will be reported on:

I. From Hailman's Lectures: 1. Comparison of Grecian and Roman Education, by Mr. P. D. Alexander. 2. Influence of Christianity on Education, by Miss Mary P. Jaques.

II. From Green's History: 1. Catholicism in England, by Mr. O. L. Sewell. 2. England under Elizabeth, by Mr. Will Mulchi. 3. The "Magna Charta," by E. S. Monroe.

III. From Watt's Improvement of the Mind: 1. Conversation, by Miss Mary H. Brown. 2. Memory, by Mr. R. O. Cavanah. 3. Meditation, by Prof. P. P. Stultz.

Said reports are to be oral or read from original composition and are not to be less than five nor more than fifteen minutes in length. No failures expected. Now, no "backing," or plea of "lack of time." Make the report on subject assigned whether or not the required amount of reading has been finished. Let us have at least *one* interesting meeting. All interested are invited.

E. S. MONROE,

County Manager P. C. R. C."

The general intelligence of the teachers is a better criterion of a state's educational standing than the number of its school-houses or the amount of tuition revenue.

One-third of the teachers of this state each year are new teachers, many without any previous training, and for them is this course especially desirable.

No more delightful and entertaining course of reading can be found than that of the Indiana Teachers' Reading Circle, and teachers ought to engage in this work with renewed zeal, for it will give them much power in the management of their schools and much force as members of society outside of the walls of the school-room.

It is earnestly hoped that the coming year will prove more successful than any other of the course, both in the plan of the work arranged and the number of members enlisted. All letters of inquiry will be cheerfully and promptly answered.

D. M. GEETING, *Sec'y*.

RACCOON TOWNSHIP, PARKE COUNTY.—The Reading Circle work has been of great benefit to the teachers of our township, all of whom took the work. At our first institute the teachers selected one of their number as leader in each subject. Each leader was to direct the discussion over the month's reading, with the remaining teachers as a class. The forenoon of each institute has been devoted to the Reading Circle. Owing to a press of other work, some teachers were unable to keep well up with the reading, but all were able to take some part in the discussions. The history was very enjoyable, being handled so as to avoid the dry details, the vital points only being brought out. But the great event of the day, with us, was the discussion of Hailman's Lectures. Every teacher was on the alert then, and the discussion was animated. The high ideals which have been formed by the study of this work can not fail of good results; while by the broadening influence of its lessons, has been counteracted much of the narrowness incident to school-room work.

The only regret of the teachers of this township is that they did not have more time for the Reading Circle work.

J. L. PRICE.

READING CIRCLE NOTES.

Attention is called to the Reading Circle statement of Sec'y Geeting in this issue of the Journal.

Secretary Geeting is having a large correspondence with county managers and teachers, but stands ready to double the amount if need be, in answering questions and explaining the organization, in the next few months.

Remember the date of the Reading Circle Examination, June 18th, 1887. Teachers who have left the county in which their reading has been done, may just as well take the examination in any other county. Any county manager will accommodate applicants if informed in time.

County managers will please not neglect to apply to the State Superintendent's office early for questions to be used at the Reading Circle Examination June 18th. Enough questions have been printed to supply all, and every manager should ask for all he may expect to need.

At the County Supts. Convention in Indianapolis about June 15th, provision has been made for the discussion of the Reading Circle interests of Indiana. It is hoped that not only county managers but institute workers from all parts of the state will be present, and add to the understanding and the resources of the board, by their wise and honest consideration and criticism of the organization and the work. The board is not only in need of, but is desirous of having the fullest and freest intelligent discussion of its Reading Circle interests. As has been previously suggested, it is hoped to have a meeting, at that time, of institute instructors touching this matter. All are invited.

DEPARTMENT OF QUERIES AND ANSWERS.

[This Department will be conducted by J. C. GREGG, Superintendent of the Branch Schools. Direct matter for this department to him.]

QUERIES AND ANSWERS.

IT is earnestly desired that readers of the JOURNAL will interest themselves in this Department, and send in their queries and answers for publication. Every teacher, young or old, has his daily difficulties and points which he does not quite understand; send them to Queries and Answers, and some one who has had the same difficulties will be ready to give an answer. Another may have a method of instruction or a process of solution which is peculiarly good; send it to us that others may be benefited by it.

This Department can be made a means of great help and pleasure to many, by each one helping just a little. Let us try. Send on your Queries and Answers. Persons sending queries will also send their answers if possible, but if the answer is not known, send the query and some one else will find the answer.

For convenience of reference, queries and answers will be numbered continuously from one month to another.

Queries published in one number will be answered in the next.

QUERIES.

- [1.] *a.* The people will be *present* at the election.
b. The secretary stood *alone*.
c. In a clear open conscience, *alone* lies true happiness.
 Parse and give the construction of the italicized words.

M. B. WATKINS,
Newark, Ind.

- [2.] How many prime numbers from 1 to 200? Give them.

[3.] A rectangular field whose width, length and diagonal form an arithmetical progression has an area of 21 A. 108 sq. rd. What are the dimensions of the field?

- [4.] Should anything besides mere process be taught a pupil just learning long division? Why?

ANSWERS.

"A Subscriber" writing from Livonia, Washington county, Ind., thinks that No. 9 in the arithmetical list of March, was not solved correctly in the May Journal, and asks that the correct solution be published in Queries and Answers. "Subscriber" will find, upon *very* careful examination, that the solution given in the May number of the Journal is correct, and if he will look carefully he will find some error in his work. But it may help him to solve this way:—

$$100\% = \text{cost} = 20\text{¢}.$$

$$140\% = \text{selling price}.$$

$$\frac{2}{3} \text{ of } 140\% \text{ or } 175\% = \text{market price}.$$

$$175\% \text{ of } 20\text{¢} = 35\text{¢}. \text{ As before.}$$

ANSWERS TO QUERIES.—I send you answers to cellar and house rent queries in April Journal:—

- (1) Let x = depth of cellar.

$$4x = \text{width of cellar}.$$

$$6x = \text{length of cellar}.$$

$$\text{Then } 24x^3 = \text{solid contents}.$$

$$\therefore 24x^3 = 192 \text{ cubic yards}.$$

$$x^3 = 8.$$

$$x = 2, \text{ depth}.$$

$$4x = 8, \text{ width}.$$

$$6x = 12, \text{ length}.$$

- (2) \$300 due in 3 mo. = \$900 due in 1 mo.
 \$300 due in 6 mo. = \$1800 due in 1 mo.
 \$300 due in 9 mo. = \$2700 due in 1 mo.
 \$300 due in 12 mo. = \$3600 due in 1 mo.

$$\text{\$1200}$$

$$\text{\$9000}$$

$$\text{\$9000} \div \text{\$1200} = 7\frac{1}{2} \text{ mo.}; \text{ the equated time of payment.}$$

Middletown, Ind.

J. N. B.

ANSWER TO QUERY in April issue of the Journal:—

$$136 \text{ ft.} = \text{length of the walls round the room}.$$

$$136 \times 20 = 2720 = \text{number of sq. ft. in the walls}.$$

$$2720 - 150 = 2570 = \text{sq. ft. to be covered}.$$

Since the boards are 5 inches wide and 4 in. are laid to the weather, $\frac{1}{5}$ of it is lost. Hence—

$$2570 = \frac{4}{5} \text{ of amount required}.$$

$$2570 \div \frac{4}{5} = 624\frac{1}{2} = \frac{1}{5} \text{ of amount required}.$$

$$624\frac{1}{2} \times 5 = 3122\frac{1}{2} \text{ sq. ft., amount required}.$$

MISCELLANY.

PURDUE UNIVERSITY Commencement June 9th.

COMMENCEMENT at the State University June 8th.

COMMENCEMENT at the State Normal School will occur June 10th.

TOPSY-TURVY is a contraction of "top side t'other way."

BOMBAST originally meant "cotton batting."

IMBECILE is derived from a word that means "a walking-stick."

LEBANON has resolved on a new school building, which will be a credit to the place. It is needed.

MARENGO.—J. M. Johnson, Principal of the Marengo Academy, will open a summer normal July 25th.

THE JOHNSON CO. NORMAL will open in Franklin July 11th, with J. E. Wiley and T. D. Aker instructors.

WATERLOO.—Supt. L. B. Griffin writes: "Last Sept. we had three reference books in the school—to-day we have a fine working library of 400 volumes.

LOGANSPORT.—The schools are in good working order, and the general feeling is that J. C. Black has made his first year's work as Supt. a success.

A SCHOOL OF METHODS will open at Waterloo July 5th, for a term of 6 weeks. Prof. M. Seiler, of the State Normal, and Supt. L. B. Griffin, instructors.

THE STATE CONVENTION OF COUNTY SUPTS. will meet in the Lecture Room of Plymouth Church, Indianapolis, June 15, 16, 17, 1887. A full attendance is desired and expected.

THE CANADA SCHOOL JOURNAL, a weekly, and the *Educational Weekly*, of Toronto, have been consolidated into "The Educational Journal," published semi-monthly at Toronto. This is a vigorous paper.

EDINBURG.—But few places of the size of Edinburg can boast of as good schools. J. C. Eagle has just completed his eighth year as Supt. The high school here is unusually large, there being this year 14 graduates. This is a healthy sign.

CENTRAL NORMAL AT DANVILLE.—Next to Valparaiso, this is the largest private normal school in the state. It has had a steady growth and is now in better condition than at any previous time. A recent visit discovered, what had been inferred, viz: a body of earnest, wide awake students, and a full corps of enthusiastic, enterprising teachers. The Journal takes special pleasure in calling attention to the fact that this school is under the direction of Mrs. F. P. Adams, as principal.

WORK OF THE STATE BOARD OF EDUCATION.

The State Board at its recent meeting transacted some important business of general interest to teachers. Besides preparing several sets of examination questions, it passed the following:

Resolved, That questions upon primary school work be prepared and furnished county superintendents for use at the regular monthly examinations in June, July, and August of each year, in the examination of such applicants as are employed to teach in the four lowest grades (years) of the schools in cities and incorporated towns and as elect to pass such special examination, and furnish the county superintendent a written certificate from the School Superintendent or Secretary of the School Board of their employment in such schools. In grading applicants for primary license the same rules and grades shall be observed as in the examination of applicants for common school license, and such license shall entitle the holder to teach in said primary grades within the town and city schools, as provided in Section 4425, R. S., as amended by Acts of 1883. All applicants for primary license shall be required to submit an original essay or review of one of the works prescribed by the State Board, as required of applicants for common school license. This order to take effect August 1, 1887.

Resolved, That this Board express its appreciation and commendation of the work of the Indiana Teachers' Reading Circle.

State Licenses were granted to the following named persons:

Adelaide Baylor, W. C. Belman, A. N. Crecraft, James Du Shane, John C. Gregg, John S. Haines, John N. Myers, Nettie F. Northcott, Mrs. Drue F. Williams, Charles H. Wood, C. M. Seil, L. H. Hadley, Martha H. Hinkle, John H. Reddick.

Professional Licenses were granted to the following:

Emma R. Chandler, Lizzie S. Byers, W. W. Byers, W. M. Coffield, F. D. Churchill, Rosalie Collins, Elvira Eels, Isadore Eels, E. W. Felts, Thomas S. Harris, Lee O. Harris, Edgar A. Haynes, Klass Vander Maten, H. D. Voris, Urban B. McKinsey.

DISCUSSION.

MRS. S. E. TAYLOR, MADISON, IND.

The Superior executive ability of Prof. Martin and his associates having incontrovertibly established the successful mechanism of the Southern Indiana Association, perhaps a small share of kindly criticism may be of use to future meetings of this intelligent body of men and women.

Why, if difference of opinion promotes growth, didn't somebody make it grow? Is it discourteous and wrong for one superior in mind

to offer an opinion adverse to that expressed by another equally entitled to claim superiority? May not one *not* so very superior dare to express an idea gained from his own experience or observation, albeit, he may differ with—well, say—Parker?

These questions arise from the fact that during the entire session, there was a perfect millenium of unanimity among the members which at times became rather monotonous. Advantage was not taken of the opportunity for debate, so well provided for by the excellent committee. The leaders in discussion, for the most part, simply produced another paper in complimentary echo of that which preceded it. Some remarkably able papers were presented, but there seems to be danger of falling into the rut of approved ideas, as well as of methods—patent methods, as the President in his inaugural so tersely expressed it.

Is educational progress come to its end, and the cover screwed down? History repeating itself, we predict that the next twenty-five years, aye, the next decade will overturn much that is now approved. Many of the ideas of the so-called New Education are not new, and there will in all probability be another "find" before long.

The martyred expression "from the known to the unknown" dates B. C., and of its mate—the abstract and concrete, Plato says: "Present abstract ideas of number in as concrete a form as possible, using apples and the like."

The word "discussion," in the first meaning given is—to break up; to disperse. Perhaps the members were not ready to go. The second meaning—to examine or consider by disputation; to debate; to ventilate; to sift; in its use, would have given a much to be desired healthful and vigorous interchange of opinion.

If "all the world loves a lover," it is equally true that all the world loves a "free fight" of words, among either politicians or educators. There were striking points where strong argument to the contrary might have been made. There was also, indisputably, intellect sufficient to bring forward such argument. To the regret of many members of the Association, as well as to interested visitors, this was not done.

NORTHERN INDIANA TEACHERS' ASSOCIATION.

The Fifth Annual Session will be held at Maxinkuckee Lake, June 28, 29, and 30, 1887.

P R O G R A M .

TUESDAY EVE., 7:30.—Meeting called to order by the President, D. D. Luke, late Superintendent Ligonier Schools. Music. Inaugural Address.

WEDNESDAY MORNING, 8:45.—Music. Paper: "Moral Training in the Public Schools," Alpheus McTaggart, of State Normal School.

Remarks on this topic. Paper: "Philosophy of Expression," Miss Tressa J. Crocker, Teacher Delsarte System of Expression, Logansport. Remarks on this topic. Paper: "More Knowledge for the Teacher," H. Gunder, Supt. North Manchester Schools. Remarks.

AFTERNOON, 1:30.—Miscellaneous Business. Address: "Victor Hugo," Hon. Harvey M. La Follette, Supt. of Public Instruction. Address: "That upon which we Work—The Taught," H. B. Jacobs, Supt. Indiana Institute for Education of the Blind. The remainder of the afternoon will be devoted to becoming better acquainted and to recreation. All are cordially invited to contribute their share to the general enjoyment.

EVENING, 7:45.—Lecture: "Leadership," Oscar J. Craig, Prof. of Political Economy, Purdue University.

THURSDAY MORNING, 8:45—Miscellaneous Business, Appointment of Committees, etc. Paper: "United States History in the High School," W. H. Mace, Normal School, De Pauw University. Remarks. Paper: "Co-operation of Parents," A. H. Douglas, Principal of North Side Schools, Logansport. Remarks. Paper: (Subject to be announced), W. B. Van Gorder, Supt. Noble Co. Schools. Remarks.

AFTERNOON, 1:30.—Paper: "The School's Place in Education," James F. Scull, Supt. Rochester Schools. Remarks. Paper: (Subject to be announced), W. R. Snyder, Principal High School, Muncie. Remarks. Report of Committees, Election of Officers. Adjournment.

Headquarters at the "Palmer House," where the meeting will take place. Rates, \$1.50 per day—a reduction of 50 cents.

Reduced rates will undoubtedly be given by the Railroads. Full particulars will be printed on Programs and distributed. Send for them. "Come one, come all."

E. W. WRIGHT,

KENDALLVILLE, IND.

Acting Ch'n Ex. Com. N. I. T. A. ■

PERSONAL.

W. T. Gooden, formerly of Indiana, has been re-elected to his position at Pana, Ill., at a salary of \$1000.

Chas. F. Coffin, formerly Supt. of the New Albany schools, is now in the practice of law at Wichita, Kan.

W. H. Sims, Supt. of the Goshen schools, with his entire corps of teachers, has been re-elected for next year.

Cyrus W. Hodgkin is making a success of the Richmond Normal, and has well-laid plans for the coming year.

James H. Smart, President of Purdue University, is now in Europe, but will return before the opening of the next school year.

C. H. Wood has been re-elected Supt. of the Winchester schools, which is evidence that his first year's work was satisfactory.

Prof. E. E. Smith, formerly of Purdue University, will spend a part of the summer in Indiana representing D. C. Heath & Co.

Geo. C. Hubbard, one of the principals of the Madison schools, is a "natural born" naturalist. His botanical collection is not surpassed in the state.

Wm. W. Spangler, librarian of the State University, will be the director of the 5th University summer trip to Europe. The party will sail June 11th.

Fannie and Jessie Stretch, formerly of Indiana, are now teachers at Winfield, Kansas. Her friends will regret to learn that Miss Jessie's health is not good.

G. L. Harding has been making a marked success as principal of the Middlebury schools, and the closing exercises of the year were worthy of special mention.

A. H. Graham has been in the Columbus schools twenty-three years—eighteen years as superintendent—the oldest Supt. in the state except the venerable Merrill of La Fayette.

E. E. White, Supt. of the Cincinnati schools, has had his salary advanced from \$3,500 to \$4,500. This indicates that the School Board are more than satisfied with his work.

Dr. Joseph Tingley, who has been in Kansas City for some time, will return to Indiana soon, and make his home in Indianapolis. He will make engagements to work in institutes.

J. W. Caldwell has been re-elected as Supt. of the Huntington schools for a term of two years. This is a new departure in the right direction, and one that should be studied and imitated.

George P. Brown, formerly of this state, now editor of the *Illinois School Journal*, has declined to consider a proposition to accept a chair of Pedagogy in an Eastern college at a salary of \$2500.

J. W. Holcombe, ex-State Supt., has been appointed head clerk to the Commissioner of Education at Washington, at a salary of \$1800. This is an honorable position and one of much responsibility.

D. D. Luke, after a long, faithful, and successful term of service, has tendered his resignation as Supt. of the Ligonier schools. Our report does not give reasons or state Mr. Luke's future intentions.

J. E. McDaniel, of the Bourbon high school, has been elected to a professorship in the college at Defuniak, Florida, at a salary of \$1000. He is the third teacher promoted from this school in the past year.

J. A. Kantz, late Prin. of the high school at Bluffton, has changed his work. He and H. E. McMonigal have become the proprietors and

managers of the *Kokomo Tribune*, one of the best county papers in the state.

E. E. Henry, formerly a Hoosier pedagogue, is now living at Springfield, O., connected with the McCormick Reaper Co. He reports himself ready to leave his present work when a good school position opens to him.

A New Castle paper states that C. W. Harvey positively declines a re-election as Supt. of the schools of that place. It expresses deep regret, and states that he has brought the schools up to a high degree of excellence.

Cyrus Smith, so well and favorably known to hundreds of Indiana teachers, has recently suffered an inexpressible loss in the death of his most estimable wife. He will doubtless have the sincere sympathy of his many friends.

S. S. Parr, the Principal of the Normal Department of De Pauw University, has about completed his arrangements to go to Europe this summer, where he will spend six months or more studying in the line of his special work.

R. G. Boone, Professor of Pedagogy in the State University, has been granted a year's leave of absence, and will spend the time in Johns Hopkins University in making a special study of those subjects that bear upon his work.

Mrs. Lucia Julian Martin, Principal of the Training School of Expression, Indianapolis, will accept engagements for an evening of select readings, humorous and pathetic, before teachers' institutes during the coming summer.

G. G. Manning will stay another year in charge of the Peru schools. Mr. Manning's term of service here runs up into the teens. On commencement evening he was presented with an elegant easy chair by his friends, as a token of their appreciation of his services.

W. J. Button, who represents Harper & Brothers in the Northwest, has removed his office to 255 Wabash Ave., Chicago. Mr. Button, as also Dr. W. J. Elstun, who works for the same house, are both Indiana men, and they will both welcome their friends at their new headquarters.

J. M. Towers, whose headquarters and home have been in Lafayette for some years past, has recently located at 138 Wabash Ave., Chicago, and continues to represent E. H. Butler & Co. Indiana is still in his field, and he will be glad to have his Hoosier friends call on him when in Chicago.

J. K. Walts has been elected Supt. of the Marion schools, to fill out the school year. He began the work while Mr. McRae was yet sick, and Mrs. McRae was out of school attending him. Mr. Walts doubt-

less feels much at home in returning to his old work after a rest of nearly a year.

Geo. F. Bass, editor of the School Room Department in this Journal, has in press a new book entitled, "Quotations and Select Stories" for use in opening exercises in schools. If Mr. Bass does this as well as as he usually does his work, the book will be in great demand. Such a book is needed.

John C. Macpherson, who has for so many years been the efficient Supt. of Wayne county, has declined a re-appointment. He has been one of the most efficient superintendents in the state, and his retirement will be a loss to the educational forces of the state. He has engaged to assist Mr. Hodgins in his summer normal, opening June 27.

Prof. J. C. Branner, of the State University, has been elected to make a geological survey of the State of Arkansas, at a salary of \$3,500 a year. It will take him two years, and the trustees will grant him a leave of absence for that time. Indiana can not afford to lose permanently one of her best scientists.

J. M. Bloss, ex-State Supt., but for the last four years Supt. of the Muncie schools, was recently unanimously elected Supt. of the Topeka, Kan., schools, at a salary of \$2500. Mr. Bloss was a gallant soldier in the late war, and made a record he can well afford to be proud of; and since his return to civil service, whether as Prin. of the New Albany high school, Supt. of the Evansville schools, Supt. of Public Instruction, or Supt. of the Muncie schools, he has acquitted himself with credit, and gained the friendship and respect of thousands of Hoosiers who will regret his removal from the state.

The death of Hamilton S. McRae, Supt. of the Marion schools, was announced last month. His body was taken to Muncie, where he had lived and worked so many years, for interment. The public schools were closed, and both teachers and his old pupils passed resolutions expressing their high appreciation of him as a man and as a school superintendent. The G. A. R. of that place, of which he was a charter member, turned out in a body, and the largest church in the place would not accommodate the friends who desired to pay a last tribute of respect to a departed friend and public benefactor.

Washington C. De Pauw, of New Albany, whose death occurred May 5th, was not an educator in the ordinary sense of this term, and yet in another sense he was a great educator, and will continue to be for all time to come. He was the wealthiest man in Indiana, and gave more than half of his estate to benevolent purposes. It will be remembered that a few years ago the name of Asbury University was changed to that of De Pauw University, because of Mr. De Pauw's liberal endowment of the institution. In addition to all former gifts, his will leaves this University \$1,000,000. He also liberally endowed De Pauw

College at New Albany. So in a noble sense Mr. De Pauw was one of Indiana's greatest educators.

W. H. Fertich, Supt. of the Shelbyville schools, as will be remembered, was sued in the court, a year ago last winter, for sending a little girl home on a bitter cold morning because she was tardy. Although it appeared in the testimony that the school-room door was locked during opening exercises in accordance with a rule of the board, and that there was a hot-air register in the hall, and a warm stove in the Supt's room near by, and that the girl went home of her own accord and was not sent by anybody, and that Mr. Fertich was at another school building at the time, he was fined \$1 and costs, which amount to about \$500. Mr. Fertich's friends will rejoice with him in the fact that on an appeal the Supreme Court has recently reversed the decision of the lower court and exonerated him from all blame.

BOOK TABLE.

COMBINED NUMBER AND LANGUAGE LESSONS: *By F. B. Ginn and Ida A. Coady. Boston: Ginn & Co.*

The purpose of this little book is to give a new and better method of teaching primary arithmetic—especially addition. The book has unqualified merit, and will be of value to any primary teacher who is desirous to keep abreast with the best thought in the line of her work. Mailing price, 60 cts.

ARITHMETICAL SOLUTIONS AND MENSURATION: *By L. M. Sniff, A. M. Published by the Author, who is Principal of the Tri-State Normal School at Angola.*

Mr. Sniff is one of the best teachers of mathematics in the country, and this little book of model solutions is just what thousands of teachers need. The methods employed are all based on principles and will aid in developing the reasoning powers of the mind. This is certainly a good book of its class.

FIRST BOOK OF CHEMISTRY: *By Mary Shaw-Brewster. New York: D. Appleton & Co.*

This little book is intended for children from 11 to 15 years old. It presents the simplest chemical operations by experiments that any boy or girl can perform at home. The kitchen will afford nearly all the material needed. The author claims that most of the experiments, for which minute directions are given, have been performed by children who were farm-lads. The idea suggested by the book, if followed, will lead children to observe and investigate for themselves, instead of burdening the memory with meaningless words.

SOME CURIOUS FLYERS, CREEPERS. AND SWIMMERS: *By James Johonnot. New York: D. Appleton & Co. C. E. Lane, Chicago, Western Agent.*

This is the fifth of a series of Natural History Supplementary Readers. With this the ground is well covered. While these readers do not propose to be scientific treatises, they do propose to describe accurately and in an attractive manner the various animals with a purpose to instruct and interest, and to stimulate to further research. The idea is an excellent one and the books are capital. They are suitable for home and school alike.

HOW TO SEE: *By W. B. Powell. Philadelphia: Cowperthwait & Co. F. S. Belden, Chicago, Western Agent.*

This little book is by the author of "How to Talk" and "How to Write," and although the last written properly precedes the others, as it is really the "first steps in the expression of thought." It is intended for children. Each page contains a picture which the child is taught to "see" and describe. The Teachers' Edition contains about 80 pp. of valuable instruction to teachers as to how to use the book. It is needless to say to any one familiar with the author's previous books that this is "just the thing."

PRINCIPLES OF EDUCATION PRACTICALLY APPLIED: *By J. M. Greenwood. New York: D. Appleton & Co. C. E. Lane, Chicago, Western Agent.*

Mr. Greenwood, the author of this book, has for many years been Supt. of the Kansas City schools, and has a national reputation for his practical, common-sense views and methods of work. This book takes up and discusses in a plain, strait-forward way several of the vital problems of school life and school work. No teacher can read it carefully without gaining new suggestions and new facts which must do him great good.

COMPLETE SPELLER, ORAL AND WRITTEN: *By J. M. Watson. New York and Chicago: A. S. Barnes & Co. Cyrus Smith, Indianapolis, Agent for Indiana and Michigan.*

Of course a school speller can contain only a small part of the more than 119,000 words contained in Webster's Unabridged Dictionary, and it is no easy task to make a wise choice. The author of this book has been fortunate in selecting those words which enter into the ordinary vocabulary of the common people. But few spellers equal this in this regard. The author also has provided for *written* spelling, as practical spelling must be written. He has also taken special pains to indicate the correct pronunciation, wisely concluding that this should be learned along with the spelling. In practical life we pronounce a vast deal more than we spell.

THE ECLECTIC GUIDE TO HEALTH: *Cincinnati: Van Antwerp, Bragg & Co.*

This volume is Brown's (Eli F.) Physiology recast and specially adapted to teaching the effects of alcohol and narcotics on the human system. Dr. Brown has been for many years an active teacher, and thus knows from experience what matter to select and how to present it, so that the average boy and girl can understand and appreciate it. The matter is well selected, well presented, well arranged, well illustrated, well printed, well bound, and well calculated to do a vast deal of good if put into the homes and schools of the country.

PRIMER OF BOTANY: *By Mrs. A. A. Knight. Boston: Ginn & Company.*

The peculiarity of this Botany Primer is that it is arranged on a plan by which the child must study the plant itself and not simply study *about* the plant. Two things are absolutely essential in order to work with this book, viz: Plants and a compound microscope. The book takes it for granted that the teacher knows something of the subject and will be able to direct intelligently the work of the child. It is not so *easy* as a book that simply tells something *about* plants, but when skillfully used will be much more profitable. It suggests the only true method of plant study.

THE CHILD'S BOOK OF NATURE: *By Dr. Worthington Hooker. New York: Harper & Brothers. W. J. Button, Chicago, Agent for the Northwest.*

This book is in three parts. Part I is about Plants; Part II is about Animals; Part III is about Air, Water, Heat, and Light. Each of these parts makes a neat little volume, which is tastefully bound and appropriately illustrated. These parts are also bound in one volume, and come cheaper in this form.

The importance of interesting boys and girls in the world of nature close about them is not always appreciated. These are excellent books and are well adapted to use in both family and school.

HABIT IN EDUCATION: *From the German of Dr. Paul Rodestock, translated by F. A. Caspari. Cloth—115 pp. Price by mail, 70c.; introduction price, 60c. Boston: D. C. Heath & Co.*

This is a valuable addition to pedagogical literature on a topic of the deepest importance. The language is simple, clear, concise, and the points developed in a systematic and thoughtful way. The author treats of the importance, influence, and meaning of habit, its results and their relation to the purposes of education, and the special habits of value in life, together with their method of formation. A chapter is also devoted to the dangers of going too far in this direction. The author is a practical teacher of long experience, and his work impresses

the reader most deeply with the grave responsibility of training a young human soul and fitting it properly for the duties of life. The publishers deserve the thanks of teachers for this valuable contribution to the science of education.

COMPAYRE'S HISTORY OF PEDAGOGY: *Translated by W. H. Payne, Professor of the Science and Art of Teaching in the University of Michigan, who adds an Introduction, Notes, References, and an Index. 5¼ x 7½ inches. Price—by mail, \$1.75; Introduction price, \$1.60. Boston: D. C. Heath & Co.*

This work, pronounced by Dr. G. Stanley Hall "the best and most comprehensive history of education in English," seems fully to merit the high praise which it is receiving on all sides from leading educators. Its value lies in the fact that it broadens the teacher's view of the great problem which he is undertaking to solve, and at the same time gives him a higher conception of the dignity of the profession to which he belongs. The book is translated in that plain, simple and concise style for which Professor Payne is noted. It is historical and critical, and yet so attractively written as to make it an interesting and pleasant book to read. The growth of humanity, of thought, and of education are shown to go hand in hand, and hence is inferred the supreme importance of making no mistakes in the onward movement in educational lines to-day.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

BUSINESS NOTICES.

Geology.

Isn't SHALER'S FIRST BOOK IN GEOLOGY the best book you can find for the Summer term? It is simple, brief, practical, fascinating, and commended by the best teachers of the subject. Price, \$1.00.

DAVID S. JORDAN, *Pres. of Indiana University*: It is not unlikely that I may use it. (Oct. 4, 1884.)

JOHN C. BRANNER, *Prof. of Geology, Indiana University*: I can not do better than recommend its use in the schools of this State. (Oct. 26, 1884.)

HENRY L. OSBORN, *Prof. in Purdue University*: I shall take every opportunity of recommending its use. (Dec. 3, 1885.)

JUNIUS B. ROBERTS, *Prin. of Indianapolis Seminary*: It is better fitted for our use than any book on this topic that I have seen. It is my present purpose to use it as a text-book. (July 29, 1884.)

W. W. BYERS, *Prin. of Terre Haute High School*: I do not know of any other book that compares with it. (Oct. 8, 1884.)

CHARLES O. THOMPSON, *Late Pres. of Rose Polytechnic Institute, Terre Haute*: It is one of the most sensibly written text-books we have. (Oct. 6, 1884.)

JOHN S. IRWIN, *Supt. of Schools, Fort Wayne*: It is a most admirable book for the purposes in view.

Also Hyatt's *About Pebbles* (10 cents); Crosby's *Common Minerals and Rocks* (in paper, 40 cents; in cloth, 60 cents); Richards's *First Lessons in Minerals* (10 cents); and Williams' *Modern Petrography* (25 cents). Please enclose above prices when ordering.

5-11 D. C. HEATH & CO., Publishers, Boston, New York and Chicago.

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*THE TEACHER IN THE SOCIAL RELATION.**

7

MRS. ALICE F. BRIDGEMAN, SALEM HIGH SCHOOL.

THE teacher has too long been regarded a peculiar creature, one set apart from the real activity of the world's work, whose school is his little kingdom, beyond the walls of which he never passes, through whose gates he never looks. For this state of affairs he is himself very largely responsible. The general current of pedagogical literature is entirely in the direction of the teacher's special duties. We are told how he should look, walk, and teach—in his school. His motives are examined, his manner is criticised, his methods are discussed, and his success is measured in view of his relations to his pupils. It is true that the teacher's duties are many and difficult, and that competent instruction in the manner of performing them certainly can never come amiss; but it is also true that as a citizen he owes something to the community in which he lives, as a member of the great human family he owes something to his fellow-man.

No man liveth to himself is indelibly stamped upon human nature, and the written law proclaims that man should love his neighbor as himself. That it is the duty of every man to do for mankind, so far as opportunity is afforded, the same work of improvement that he should do for himself, is a plainly stated principle of ethics.

*Read before the Southern Indiana Teachers' Association at Madison.

The teacher has, of course, innumerable opportunities to improve the minds of his pupils by the impression of wholesome lessons, but his duty does not end here. What ought he to do outside his own profession is our question. What ought he to do for society in general?

The teacher being presumably a scholar, has by virtue of his abilities and opportunities, greater social responsibilities than those less favored. Again, if he is thoroughly imbued with the true spirit of teaching he will not desire to bound his influence and efforts by the school-room walls, but will rejoice to enlarge his field. The school should be the center of the teacher's life, but let it be the center of a large circumference.

Scholarship is the deepest need of the teacher of to-day, scholarship that will command respect by its breadth and make itself felt in the community. Holland says, in speaking of college professors, what will apply in some degree to all teachers—"The college professor, as a rule, is bound up in his specialty. He has but one side to him, and that side always turned toward the college. He teaches within the walls what he has learned, and betrays no fructification of thought and feeling in production. He gets into his rut, which grows deeper and deeper with the passing years until, at last, his head sinks below the surface and he loses sight of the world and the world of him. Now the difference in their influence between such a man as this and one who writes successfully, or preaches successfully, or speaks successfully, or investigates successfully new fields, must be in the nature of things very great."

Behind the teacher's work stands his character. His influence can not be better than himself. A man's real life is the outcome of his character, whatever that may be, and disguise is impossible. That the teacher should be an upright, moral man or woman needs no argument. His character should be irreproachable. No man whose life is not a worthy example to children ought ever to enter the school-room, and no trustee who willingly commits children into the charge of immoral or doubtful persons should be given a chance to repeat the offence. No matter what his bearing and conduct may be before the pupils, indeed the

more exemplary this is, the more influence may he have for evil. Whenever positions of honor or trust are given to those unworthy the confidence, the stigma of dishonor is in some measure removed and virtue is cheapened. A teacher known to be intemperate or untruthful exerts an influence for evil not only upon his pupils but upon the whole community, which all the moral instruction he can give will never counteract. The first duty of the teacher then, is to set a proper example of morality and good citizenship.

In addition, however, to this silent teaching, there is a work which will bring him into clear contact with the public, not merely in friendly relation, but as a positive uplifting power. Many a conscientious, faithful teacher is undervalued because of exclusiveness. I do not believe it to be necessary or desirable that the teacher should be a friend or visitor in the homes of his pupils. He has a right to choose his companions as any other citizen has; but at the same time every teacher must realize that he is in a peculiar sense a servant of the people, and that his success depends largely upon the estimate which the people place upon him and upon his work.

If, as we have said, it is the duty of every man to improve mankind, there is no limit to the work of improvement except that which time and strength impose. Every movement which has for its object the culture or uplifting of society demands and merits the aid if not the leadership of the teacher. He must feel an interest not merely in his school but in humanity. Emerson says: "We want men of original perception and original action; men of classic, men of moral mind, who can live in the moment and take a step forward, who can open their eyes to the interest of civilization." It is the duty of the teacher to inculcate a desire for knowledge, to cultivate a taste for good reading, to do whatever he can to stem the tide of impure literature which is doing so much more harm than many of us even dream. How this is to be done is a question to be answered by each individually. Your own surroundings must determine your plans, but if you are really in earnest you will find a way to accomplish something. That must indeed be an intellectually barren field where a reading circle will not grow.

In almost every town and village there are young men and women of leisure and intelligence, with disgust for their humdrum, monotonous social life, with ardent desire for higher culture, for mental improvement. Only the voice of a leader is needed to direct this activity into channels of usefulness. Such an opportunity should not be slighted. It is true teachers do, or should do a great deal of reading and study adapted to their own special needs, but it is worth the time and labor to make this experiment. No labor is more delightful than when pursued in common by a circle of friends who meet upon the plane of equality. It invigorates and stimulates thought and activity as nothing else can.

Culture is the only known cure for gossip, so that the standard of conversation will be raised in proportion to the increase of knowledge. Venomous people, it is true, talk of their neighbors out of maliciousness, but most gossip is the result of ignorance. People *must* talk, and if they have no other topics they of necessity will discuss the bank accounts, the wardrobes—the private affairs generally—of the family next door. It is generally believed that women are more addicted to this vice than are men; however this may be I know that the example of one woman who persistently refuses to meddle with her neighbors' affairs and discourages the habit in others by the introduction of profitable subjects of conversation, may work a wonderful reform. Culture creates wealth, increases comfort, and provides refinement, and he who increases the amount of culture or improves the quality is a benefactor.

Again, the people need instruction upon many vital points of school work. No great public enterprise can succeed without the hearty support of the people. Our public schools are properly regarded as peculiarly for the people, its pupils are the children of the people, and they to be successful ought and must have in a marked degree the sympathy of the people. It is of the highest importance that there be a general understanding of the needs, the aims, the purposes of our schools.

Who should be so able, so capable of the work of setting forth these as the teacher? He should be thoroughly acquainted with

the history, the nature and ends of education. Since education is his profession he should understand its relations to individuals and society better than others understand them. If education is a benefit personally and socially, why should not the teacher proclaim it so? It has been said that "Every school must be blessed with the presence and inspiration of a teacher worthy the high vocation of instructing the people," but how many are so blest?

The benefits arising from social intercourse are very many. Whatever good you may do will be returned many fold. The consciousness of having performed your duty, the knowledge that you have implanted in one mind a desire for better things, a craving for a broader culture, will recompense you for the expenditure of much weariness, of much time and labor.

The effects upon your school will be wonderful. A teacher who stands as a leader in education can influence his school as no other man can. A community instructed as to the value of schools in general will take a special and specific interest in its own school, and this interest will act as a stimulant upon scholars and teacher. Another result, a consummation most devoutly to be wished, will be the increased respect for the teaching profession. It can not be denied that among persons even of intelligence there is a lack of proper respect for the teacher. Parents speak carelessly, disrespectfully even, of those into whose care they commit the training of their children. We have not fully recovered from the notion that anybody too weak or too lazy to be anything else may be a teacher. The very inadequate salaries paid teachers is another evidence of the low estimation in which (in some localities) they are held. After all, however, a profession or calling is judged by the requirements it makes of its members and the influence which it exerts in the world. In teaching perhaps, more than any other profession, the innocent suffer with the guilty, the competent are charged with the failures of the incompetent because of the difficulty of judging individual work, and the habit of judging teachers as a class. This can be remedied only by teachers asserting their individuality in social life.

Contact with vigorous, mature minds is favorable to your own improvement. Every teacher is aware of the narrowing influence of constant association with immature and weak minds. That we may see ourselves as others see us, we must compare ourselves with men and women, not with children. You may, of course, have some of your pet notions overturned, you may be compelled to dismount from your hobby, but you will be compelled to *think*. The friction which arouses a freezing man is painful, but it saves him.

In all a teacher's relations with the public his manner is of the greatest importance. A disagreeable, rude manner will work failure to the best intentions. It will not only repel from you, but will work harm to the cause you represent. Whenever learning is accompanied by moroseness or boorishness it loses in the public mind by that association. On the other hand, frivolity and levity are equally to be avoided. The natural tendency of the over-worked and necessarily self-restrained young teacher is, when the restraint is removed, to indulge in unduly frivolous recreation, and so we sometimes fail to see in teachers' assemblies that earnest, dignified behavior which is seen elsewhere. We must remember that the teacher's manner is naturally and properly the subject of public criticism.

Why do we so often hear it said: "I know a teacher for a teacher as soon as I see one?" This is greatly to be deplored if it is true, as has been said, that he who proclaims by his manner and conversation that he is a school-master is not an adept at his art. We too often carry into society our school-room manner instead of carrying into the school our society manner. Charles Lamb expresses himself upon this subject in these words: "We are never at our ease in the presence of a school-master, because we know he is not at his ease in ours. He comes like Gulliver from among his little people and he can not fit the stature of his understanding to yours. He is so used to teaching that he wants to be teaching you." Is it true that of those who make the latter mistake many are among the leaders, and this fact shows the tendency of the work? Nevertheless the tendency should be overcome.

The matter of personal appearance and dress has a direct effect upon the teacher's standing. Untidiness and carelessness are by no means the signs of genius, though unfortunately they sometimes are found in its company. The other extreme of dressing is almost equally bad. That teacher who spends all her salary in dress, not only proclaims to the world that she considers her body more worthy of adornment than her mind, but sets a hurtful example to the young women within her circle of acquaintance. Extravagance is peculiarly an American vice and is so recognized by political economists who deplore our waste. What is your example in this matter?

After all, can not all the duty of man to man be comprehended in the one great duty to establish character, to improve the morals? Education (using the word in its limited sense) is only valuable when it is directed and controlled by the right. Morality should be the end of all our work. This is best taught not by precept but by example. While this is true the earnest teacher owes it to himself and the community to identify himself with every movement which has in view the moral uplifting of humanity. He should encourage every effort to suppress crime, to diminish temptation, to increase means of innocent enjoyment. No one knows better than the teacher the temptations which beset the young, and no one knows better than he the way to overcome them.

The relation of teacher to fellow-teacher is another important consideration. In how many cases are the relations existing between the teachers of the same school helpful or pleasant? The mere fact of teaching in the same building does not obligate two persons to personal intimacy; their tastes may be different, their acquirements unequal; they may as individuals have nothing in common; but as members of the same profession, workers for the good of the same community, they owe each other courteous treatment. Teachers are proverbially jealous of each other and critical of each other's manners and methods. The moral effect of this jealousy is in many towns very perceptible, and of course harmful. School factions in communities are too often traceable to factions in the corps of teachers. What think you must be

the condition of affairs when a superintendent fears to express his approval of one teacher's work lest another may know it and be offended? I have known schools whose instructors came early and stayed late that they might enjoy each other's society and conversation, and I have known others where the desire seemed to be to avoid all intercourse as much as possible, and in each case the result was precisely what you would expect. A strong school feeling is a very great advantage, not only to the young and inexperienced learner, but to those better qualified.

I now come to a part of my subject which is of little direct concern to a large proportion of this audience—the teacher's duty as a member of the state. In this matter I shall feel no hesitancy in speaking, since no remembrance of neglected duty or fear of immediate shortcomings can intrude. The duties of citizenship are becoming more and more a subject of study in schools and colleges, but instruction in this matter like lessons in manners and morals make little impression upon pupil or public until brought from between the lids of books and put into practice. Whether or not the end of education is good citizenship, the state has a right to demand that her children be in some degree prepared for it by her instructors. What does it avail a boy to learn that "voting is a duty" when he knows that the teacher in whom he has confidence habitually neglects it? If, as a great foreigner once said, American bayonets were victorious over British arms because they were thinking bayonets, is it not desirable that American ballots should be *thinking ballots*? Our country is threatened by many foes as dangerous as a foreign invader, but they must be conquered by the ballot and not the bayonet. Corruption, bribery, ballot stealing will never be abolished so long as so many men of intelligence, learning and morality hold aloof from active politics, wink at evils in their own party, and unreservedly condemn others. The enemies of America are those of her own household, and are to be vanquished by her own sons. A writer some years ago called attention to the parallel between the decay wrought in Rome by the influx of foreigners of lower civilization and the state of things now existing in our country. He sees in it a danger to which no European country furnishes an analogue. Of course we call

those who predict such direful things croakers, but the alarm has been too often sounded to be without cause.

Next to obedience to law, the securing of good laws and the enforcement of them should be the high aim of every American citizen who has the good of the rising generation or the welfare of his country at heart. But how often does it happen that men wait until the party leaders nominate corrupt or inefficient candidates, and then vote for the one that happens to belong to a certain party. Voting has come almost to be a choice of two evils because of the carelessness and neglect of able men. Such indifference has been called the "treason of republics."

But even in this matter of politics the teacher has a special duty. He has an opportunity to advance the interest of his calling, to further the ends of education. In no way can the influence of an educator be made more powerful than through proper educational legislation. How often have our schools been crippled by inefficient and foolish laws. Legislators in general are more concerned in those things which affect directly the material interests of the country. For want of information they do not realize the worth or value of our school system, and until this cause is represented by one who is competent and worthy to lead such a cause, we shall continue to be disappointed of our hopes. No greater mistake can be made than to stint the schools. Liberal investments will secure liberal returns. If, as I have said, education produces wealth, some sacrifice of means may well be made to combat ignorance, the mother of poverty. When statesmen understand the needs of schools and appreciate their worth, then may we hope to attain satisfactory results. No other interests are so poorly, so inadequately represented in the government as are the interests of our common schools.

In all that has been said so far, the duties of the teacher have been considered, but in return for all the services which he renders mankind the teacher may demand rights and privileges. There are two sides to this matter. In every relation of life the obligations are two-fold. I wish to speak briefly, therefore, of the teacher's rights. In the first place he has a perfect right to his own political opinions and religious views, and no trustee

has any right to question them so long as they are not made offensive or do not interfere with the work. The man chosen to fill a position because he has no political preferences or religious prejudices is generally found to have no preferences nor prejudices about anything else. He is distinctly related to that teacher who when asked his idea of the shape of the earth declared he was well acquainted with both theories and would teach it round or flat as the patrons preferred.

Again, the teacher has a right to your respect. By giving him his position you declare your belief that he is a fit person to instruct the young; as such he deserves your courteous treatment. If not worthy your respect and trust he is by no means fit for the place, and every citizen owes it to the helpless children in his charge to see that he is deprived of it. No parent has a moral right to detract from a teacher's influence or reputation out of prejudice or personal dislike. If education is a need, if teaching is a profession, then why is a true teacher not as worthy as an earnest minister, a well versed lawyer, or a skilled physician?

Whenever the training of immortal souls shall be considered of as much importance as the building of houses or the laying of railroads, teachers will be chosen with reference to their fitness and ability, and will be respected accordingly. May that day soon come.

() *MISTAKES IN SCHOOL GOVERNMENT.*

LEE O. HARRIS.

It is common for persons, when they have been assigned to any duty on such an occasion as this, to preface their remarks with the statement that they wish some one more competent had been selected to present the subject. Now there is a slight vein of egotism in my composition which impels me to say that if twenty-eight years experience and practice in the "mistakes of school government" entitles one to respectful consideration in the matter, I think your committee could not have made a more suitable selection.

I began my first experience mistakes in in the fall of 1857, and have continued, with some slight intermissions, up to about a week ago. So you see I am in pretty good practice. It is true there have been some slices of success sandwiched between the mistakes, yet on the whole, I feel that I am warranted in insisting upon the original proposition: that I am authority on mistakes.

In this connection I feel like expressing myself in the language of a celebrated French oculist, who, when complimented on a very difficult and successful operation on the eye of a patient, said: "I may be able to perform some rather creditable operations now, but I spoiled a bushel of eyes before I could do it."

Since this duty has been assigned me, I have taken some pains to classify my extensive collection of mistakes, and I find them naturally arranging themselves under the following heads:

- | | |
|---------------------|-------------|
| 1. Ignorance. | 4. Temper. |
| 2. Inattention. | 5. Dignity. |
| 3. Procrastination. | 6. Hurry. |

Some have doubtless got away, but under these heads remain enough to occupy all the time I shall have to devote to this subject.

Ignorance is a disease to which we are all more or less subject—because it is hereditary. (This plea of heredity, you know, covers a multitude of sins. It is a nice thing to be able to throw the blame of our shortcomings upon our ancestors. It doesn't hurt them and it saves our self-respect.)

A mistake made through ignorance is considered more excusable than any other, since it is unconsciously made. It is a species of involuntary mental homicide—just as hard on the victim as though it were intentional and premeditated, but against which a plea of "mitigating circumstances" may be entered. But the mistakes of ignorance are more injurious in their effects than any others, since they are seldom discovered until it is too late to remedy them. The ignorant physician may correct his mistakes by a timely use of the stomach pump, but as yet there has been no brain pump invented. The mistakes of ignorance are like tracks in the snow; never seen until we look back on them. And the teacher who never looks back never discovers

the tracks. If I had never taught a second school, I would have continued to think of my first with a great deal of self-complacency. So I frequently hear persons who have taught but one school, boast of their success. A little more experience might have lifted them to a vantage ground from which they could have discovered their failure. I will not attempt to enumerate all the mistakes of ignorance which I find in my pedagogic cabinet. An open confession is said to be good for the soul, but no one is obliged to criminate himself beyond the mercy of the court. Besides my mistakes may not be the same as yours. We may use a different brand of ignorance.

Such mistakes can only be corrected by that experience which each must get for himself. If he continue long enough in the profession he will, as the Swedish proverb has it, "either make a spoon or spoil a horn." His chief consolation in the matter is that there are so few patrons of the schools who can tell a perfect spoon from a spoiled horn.

One of the worst kinds of ignorance with which the teacher has to contend is his own ignorance of human nature. The young teacher nearly always sets out with the idea that the study of human nature is a sort of occult science, very abstruse and very difficult. That he must become a sort of combined phrenologist and mind reader. The truth is that he has just as much human nature as his pupils, and he can study the home article to much better advantage than that of some one with whom he is not on such familiar terms. In this study he needs to draw somewhat upon his recollection. There is no teacher but was once a child. Some of us will have to look back quite a distance—but we can all recall the time with more or less distinctness. Then let the teacher recall as much as he can of his own early disposition, his preferences and his dislikes, his pleasures and tribulations, for he will find them, to a greater or less degree, in those under his control. Or, failing in this, let him remember that men and women are but children of a larger growth, more prone to evil, more stubborn, more conceited, perhaps, but still of much the same nature. Let him take Charles Reade's advice, "Put yourself in his place."

This will give him the point from which to start. Treat your pupils like gentlemen and ladies. If they are not, you will soon find out wherein they lack those qualities, and it will then become your duty to endeavor to supply the deficiency. The little vices and peculiarities of disposition will constantly betray themselves. Watch them. Remember them, and regulate your management of the child accordingly. In a few days you can know the disposition of every child under your charge; always provided, however, that you know your own disposition and have it under control. The mind of the child is a mirror, quick to reflect whatever is brought before it. Show it a scowling brow and it will scowl in return. Smile, and it will beam on you with pleasure. That is, if you or some one else has not handled it unskillfully and cracked the mirror. More than half the distorted reflections in the school-room come from cracked mirrors. In such cases you will have to turn glazier and mend it as well as you can.

The mistakes of inattention are varied and numerous. The absent-minded teacher can best counteract the evil effects of this habit by absence of body as well. In the school-room the mind must not only be present but omnipresent. Concentration of thought is necessary for the pupil, but divisibility of mind is essential to the teacher. He who becomes so absorbed in his class work as to forget his surroundings is likely to be awakened to unpleasant recognition of them sometimes. This absorption on the part of the teacher is frequently due to his own efforts to comprehend the subject of recitation. The musician but partially familiar with his tune must keep his whole mind concentrated upon it, or his fingers may go astray; but the one who is thoroughly acquainted with his theme can play and converse with you at the same time. So in teaching. Study your subject until it becomes a species of reflex mental action. Your senses will then be available as sentinels over disorder.

It has been said, "Keep your school busy and it will govern itself." This is a pretty little aphorism, for state occasions, but of little use for every-day wear. I do not say it can not be done, but in order to do it the teacher must be able to see all things at

all times. Not only this, but he must be able to see things before they occur and check them before they begin. I am aware that this sounds like a paradox, but it is true, nevertheless. Just such intuitive sight must the teacher possess who expects to make his school self-governing by keeping it busy. Mind, I do not deny that schools can be kept busy, so far as work is concerned, but some pupils can work and play at the same time. It is the self-governing part that I have my doubts about. I have had no experience in that direction. Self-government is a good thing, but a little less of it in the schools and a little more among the teachers would conduce to better order than sometimes prevails.

Some teachers look without seeing. The successful teacher must see without looking. To look without seeing is more than not to look at all. When pupils can perform their tricks under the very eyes of the teacher without his being conscious of the fact, they soon acquire a contempt for his government. There is nothing elevates the bad boy so much in his own estimation as to find out that he can cheat the teacher, and his meanness is very likely to grow in proportion with his self-conceit.

Procrastination is a thief, whose peculiarities are not confined to time alone. The procrastination of the teacher nourishes the seeds of disorder. The youthful mind, like the newly-turned soil, has its spontaneous growth of weeds. The time to destroy them is when they first make their appearance. The teacher who puts off this work to a more convenient season is like the slothful husbandman. He will have to sweat for it after a while. You remember Poor Richard's motto: "Take care of the pence and the pounds will take care of themselves." Apply this to your work. Take care of the little things and the big ones will take care of themselves. Or, rather, there will be no big ones to need your care. The bad boy handles school discipline as he would hot iron—he feels of it first. If he is not burnt, he tries it again. Keep it hot, and he will let it alone.

One paper wad does not make an uproar, any more than one swallow makes a spring. But one wad will follow another as certainly as one swallow follows another, unless the boy who

shot the first wad is taught that you are there to instruct young ideas in a different kind of shooting. The first crooked pin may be a source of discomfort only to the boy who cries "ouch!" but there is a spirit of imitation, not to speak of retaliation, which it will soon give you trouble to suppress. The first whisper in school is the first shot on the picket line, fired to try your strength. The volley will soon follow if you do not show a bold front.

School teachers are required, by the very nature of their occupation, to make many sacrifices, but perhaps the hardest, as it is the most important, is the sacrifice of temper. Temper is a luxury which no teacher can afford to indulge. Like all forbidden fruit it seems very sweet sometimes. There are occasions when you would like to exchange moral suasion for a revolver, but that is a satisfaction which you must learn to deny yourself. If you have a temper, bottle it up for the benefit of your friends who can not help themselves. To carry it to the school-house is to furnish a handle by which unruly pupils will drag you into trouble. Though your temper should goad you like a jumping toothache, you must grin and bear it. He who would teach others to walk must himself keep his balance. Anger is blind, and a blind teacher is at the mercy of his school. If you do not possess the virtue of a sweet disposition you must assume it. This may be deceit, but it is excusable under the plea of self-defence.

Ladies, has it not happened that at some time a great, awkward man has trod on your train, to your great inconvenience if not danger to the garment? How sweetly you turned to assure him that it was of no consequence. You may have relieved your mind about the matter after you got home, which was all very right and proper, but the requirements of society demanded that you keep your temper at the time and you did it. That is the spirit we should carry into the school-room. The spirit of the lady or the gentleman. But too frequently, when a pupil does something to inconvenience or annoy us, we forget what is due to ourselves as well as to the child, and give it a frown, perhaps a slap. Give the man a slap, if you please; he deserves it; for he is old enough to know better. But the child, let it receive the smile, though it be necessary to accompany it with a reproof.

In my fifth division I have set down "dignity." Can dignity be mistaken? Yes, when she forgets to be herself. Respect is the first element of obedience. A proper dignity is the mother of respect. By dignity I do not mean pomposity. That is only its caricature. Nor will distance and coldness suffice as a substitute. Your school-boy is a natural detective. He can read you better than you can yourself. An assumption of arrogant superiority is not impressive—it is aggravating. But there is a quiet dignity, born of conscious superiority, which obedience loves to honor and which rudeness hesitates to approach. That is the impression you need to make. Some teachers can not play with their pupils without sacrificing their dignity. Others can play and still command respect. The latter may engage in the amusements of their pupils with safety; the former would better look on. When I could overleap and outrun my boys, I leaped and ran with them. I don't do it now. Never let your pupils get the idea that they can excel you even in their plays. I do not mean that it is necessary for teachers to be athletes, but if you are not, don't pretend to be. It is your policy to find out all you can about your pupils and let them know as little as possible about yourself. More teachers "give themselves away" on the play-ground than anywhere else. Not in the matter of athletic sports alone, but in little peculiarities of disposition and temper. It is not so very difficult to preserve your dignity in the school-room. Watch yourself on the play-ground.

Never be in a hurry. The teacher and the rope-walker should always be deliberate. A dizzy head is fatal to either of them. Hurry, like anger, is destructive of self-possession, and promotes disorder. I say nothing with regard to its influence on the efficiency of your work. I speak wholly with respect to the control of your school. I believe in energy and promptness, but hurry is energy gone to seed. Some teachers are always on the boil. Then is the time the school boils too. If you find yourself getting in a hurry, stop and take a new start. If your school gets in a hurry, stop it also until it gets breath.

These are but a few of the mistakes in school government, but I have already mentioned more than either you or I will be likely

to correct. As before stated, I have had practical experience with most of them. I shall very probably fall into all of them again, sooner or later, for it is much easier to preach against an evil than to avoid it when it comes our way, but this will be no excuse for you should you not profit by my confession.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

LOGIC VERSUS ARITHMETIC.

THE fight is on now in the upper regions of education, between two species of arithmetic. The one kind may not inaptly be termed the bare-bones of the subject. In it, arithmetic is restricted to those relations of whole and part which may be expressed in an equation. To illustrate, we will take a problem from Fish's Arithmetic, No. 2, page 58, (used in illustration first by Geo. P. Brown, in the *Illinois School Journal* :)

"A farmer sold 16 cords of wood at \$3 a cord, and 40 bushels of wheat at \$2 per bushel. He received 15 yards of cloth at \$4 per yard, and the remainder in money; how much money should he receive?"

The bare-bones arithmetic, lately contributed to educational science, requires this problem to be stripped of its concrete conditions of farmer, his wood-pile, the wheat-bin, and jeans-cloth, and the arithmetic restricted to the abstract relations expressed by $([16 \times 3] + [40 \times 2]) - 15 \times 4 = ?$ In other words the thinking about farmers, wood-piles, wheat-bins, and bolts of jeans kersey is no part of the science of arithmetic, but a foreign element dropped in, which becomes an intruder and should politely but firmly be shown the back-door. The long and short of this side of the controversy is the simple fact that arithmetic is the science which deals with the numerical relation of whole and part detached from particular objects and quantities.

The other party to the educational skirmish hold to the commonly accepted view that arithmetic includes the universe of

matter and spirit, and that we may introduce as many farmers, wood-piles, wheat-granaries, and bolts of jeans as we please.

The chief slinger on the side of the Philistines is Gen. Francis A. Walker, President of the Massachusetts Institute of Technology, and one of the most noted American writers on political economy. Those whose hands are against him are legion, but the chiefest of them are the Boston Masters and the teachers of the Boston schools.

It must be confessed that Gen. Walker seems to have the best end of the fight. He certainly is correct in his conception of arithmetic as a science. Regarded in this light, number is concerned with but one attribute of objects, viz., numerical quantity; all others are foreign to the subject as a science, and belong to its application as an art.

Again, is not Gen. Walker right on the pedagogic side? The pupil loses sight of the arithmetic of his problem in dealing with the logic of his farmers, bins, and jeans, so that in the end he fails to come out of his drill with a clear grip on the mathematical principle he has been applying in a confused manner. This, we take it, is the gist of the objection to the current methods in arithmetic.

On the other hand, the lower grades are incapable of dealing with arithmetic as a science, and hence any attempt at teaching them in that phase of the work must fail. But it is also true that "baby-work" is carried along up through the high-school, thus depriving its pupils of drill in the principles of the science.

S. S. P.

A DIFFERENCE.

WHAT is the difference between our two old friends, Addition and Multiplication? Well! there are many differences, but some one of them is the most important of all. What is it?

Addition has its own set of terms; multiplication has a set peculiar to itself. The result in one case is called the *sum*; in the other, the *product*. Both are forms of combination. This, however, is a likeness. One employs two sets of *figures*, named respectively the *multiplicand* and the *multiplier*. The other may

employ any number of sets of figures. These singly are called by the little-used name of *addends*.

Multiplication presupposes addition. And yet none of these things are the real question. What is their fundamental difference? The difference of the two may be found by defining each.

It is somewhat common to hide ignorance of what addition really is under cover of the statement that it is the process of finding the *sum* of two or more numbers. But what, may we interject, is behind the three-letter word *sum*? It is also common to say that multiplication is the process of taking one number as many times as there are units in another. This is another confession of ignorance.

Suppose we say that these two fundamental operations differ in the way they employ memory, which is their fundamental difference. In addition we remember results step at a time, while in multiplication the result is remembered by one act.

Thus as we add up a column containing 5, 7, 3, 4, 6, 8, 3, 2, 9, and 1, we look at 5 and 7 and remember their combined amount as 12, which we see in relation to 3, the combination being 15, etc. Or, we might see 5 and 7, and 3 and 4 as one combination, besides other possible combinations, according to our skill in adding. In any case we should employ consecutive acts of memory to unite the numbers.

But, if we say 6 times 7 are 42, evidently the statement that the process is that of taking one number as many times as there are units in another, tells absolutely nothing of the real process going on in the mind. We do not *take* either of the numbers *anywhere*, the shades of the lamented Ray to the contrary; no more do we take 7 six times, if *times* means that we take it once, then again, and again, and so on.

We simply remember that 6 sevens are 42. This fact was originally learned by putting sevens together and observing the result, and continuing this until the memory was sufficiently impressed.

If all this, then, is true, the fundamental difference between Addition and Subtraction is one of mode of memory. This fact is, likewise, the central point in the teaching of the subject.

S. S. P.

THE INTERMINABLE SCRIPT-PRINT QUESTION.

THERE is a perennial discussion of the relative merits of script or print, as the proper form of word with which to begin primary reading. Like the two men who sued each other, the one because the other's ox got into his boat, ate off the hay-rope and stole it, and the latter because the former's boat had stolen his ox, both sides of the script-print feud are right and both are wrong. The reasons on both sides are interminable. The good points of each are counterbalanced by the bad ones of the same.

The claim upon which script chiefly rests its merits, that is, that the child should begin with script, because he needs to learn right pen-holding and writing, falls to the ground before the fact that a six-year-old child is incapable of the writing movement, and whatever the kind of letters employed, will go through a stage of rigidity and mechanical muscular action.

On the other hand, the claim of the "Big-Endians" in this dispute, that the child is compelled to learn two sets of letters, is only partially true, since script and print are at least as much alike as the printed letters of the book and those made at the board by the teacher.

The fact seems to be that the real merits of either "method," if such a mode of starting can be called a method, depend on the skill and naturalness with which the work is done. The way in which any kind of work is done is of far more importance than the little differences which may exist between two nearly equal modes of beginning. The efficiency of results depends on right modes of doing each step of the work rather than upon any finical niceties in the point of departure.

By all means let us have the discussions and dig all the ground over in search of new ores. But let us keep the important facts beyond our present digging in sight. The general tone of work of any kind is always of more importance than over-niceness about little distinctions. To use Huxley's figure with regard to those who decry metaphysics, let us not decry bread while our mouths are running over with some peculiar kind of buttered toast—which we should do, if we forgot the general tone of work in jockeying over trifling details.

FEWER SIGHT-DRAFTS.

INSTITUTE-SEASON is coming upon us with all that implies. The army of big instructors, little instructors, doctors, (including M. D., LL. D., and D. D.), professors of all kinds, superintendents, presidents, principals, and high-privates from the rear-rank of the school-room will soon pack their grips, get their dusters laundried afresh, buy a full-fare ticket under the interstate law, and—well, you know the rest!

“How are you?”

“Never was better.”

“Mighty glad to get back to this county!”

At the close: “This is the best institute I ever attended!”

Well! it is the old, old story, and, if the twentieth century should have institutes, something like it will be the story then.

The little, shy teacher will be there; so will the antipode of her, the bold flirting one; the handsome “school-ma’am,” the homely “teacher,” and the gawky tyro in cassimeres and celluloid collar.

Some will have note-books and some will have none. The latter are out of the question, by the very conditions of the case. But we are at present concerned with neither of these interesting classes, but with that educational genius, the instructor.

Will he use diagrams? We think that in many cases he will.

May we beg of him not to do it! At least not too much!

Diagrams are like sight-drafts. They represent in epitome, a section of some subject previously thought out with care and precision. They are sight-drafts calling for a certain amount of thinking to have previously been done.

Does one give another money by giving him a sight-draft drawn on himself when he (the receiver) has no money in bank? No!

Diagrams, then, are nothing, unless they represent thinking the members of the institute have previously done, and on which they are sight-drafts to be satisfied.

Diagrams as means of teaching a subject are fiat-money. They practically say, “This is a subject.”

As one can not make a dollar by saying of a piece of paper,

"This is a dollar," so he can not make a few words joined by marks that resemble the tracks of intoxicated grubs, a subject, by declaring of them, "This is a subject."

SOMETHING MORE.

GEN. WALKER is desirous of bringing Arithmetic and Logic into court and effecting a divorce between them, except so far as the one is a prime necessity to the other. And, come to think of it, one is hardly agreed that arithmetic or any other subject should be made the vehicle for teaching more of logic than necessarily belongs to it, however much the logic is actually needed. Our friend at the Hub has delivered some resounding blows on the hippotamus-hide of accepted usage, in the matter of traditional arithmetic. We desire, with credit to our own account, to lay on with both hands over the withers of another subject which is made the vehicle for a great deal of gratuitous logic, or, perhaps better, the want of it, namely, so called grammar. Richard Grant White properly characterized the English as a grammarless tongue. If its grammar were confined to such features of present language as are marked by special forms, the subject would be reduced to a fraction of what it now appears to be in our text-books on the subject. Among distinctions that are without any counterpart in form we might name the distinctions of sentences as declarative and imperative; sentences as complex; sentences into subject and predicate; nouns as to person; nouns as to objective, nominative and independent cases; many nouns as to gender and number; some pronouns as to number, gender and case; verbs as to gender, etc., etc. One seems to plant himself on radical ground and to raise his hand against usage long established, yet we believe he should go beyond the *ultima thule* proposed above, and say that we have no need of any grammar not based on actual distinctions in form. This would, it is true, cut English grammar down to a slender thread and spoil tons of grammar-books and trouble other tons of pedagogical brains to learn something else in its stead, but what of it?

Evidently the rest of so-called grammar is either logic or rhetoric and should be studied in connection with these subjects, or

else learned incidentally in connection with all subjects. It is no extenuation to say that this subject as taught helps the pupil to use his mother-tongue and gives him drill in thinking. We cheerfully grant all this and much more, but still the question remains, Is this the proper place to give this training? Can it not be more economically given at various places in all the subjects.

Perhaps we may compromise the matter by admitting those distinctions not marked by form that may be determined to need the emphasis of special study, if there be any such. At any rate a great deal has been introduced in the study of grammar that has no immediate relation to it, and, like those features of arithmetic to which Gen. Walker objects, they obscure the real principles of English so far as it has a grammar. So, while we are cleaning house, let us dust out this cranny of the language-corner. Nobody, until recently, thought of challenging the introduction of matter into the common-school studies, and, hence, we can not wonder, if nearly all of these subjects are loaded up with part cargo of rubbish or other foreign matter. The sooner we inventory them and rule out everything foreign, the better.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

REFLECTION IN PRIMARY WORK.

REFLECTION is a term that is not usually associated with work in the early grades; yet if properly understood it indicates the nature of the work appropriate to those grades. The power to *reflect in the presence of things*, is that which the primary teacher wishes to confer upon the pupil. The early years are peculiarly years of training. Habits of accurate thinking in the presence of the concrete should be the result of primary work. The first years of school are preëminently years in which the faculties are to be sharpened, trained and disciplined, and the later years are the ones (if any are to be set apart for that), in which to "store the mind." When the mind has been trained to accurate, me-

thodical habits, then all facts that are, as it were, poured into the mind, will, on account of the mind's trained habits, be spontaneously systematized and assimilated.

If the opposite course is taken—that of storing the mind without putting stress upon the formation of accurate habits of reflecting concerning the facts presented, the tendency to gather facts and not think will become so firmly implanted that it will be very difficult to remove it. One of the chief heresies in educational theory is the proposition that the early years of school are the ones in which the mind is to be stored with facts, and later years the ones in which it is to be disciplined. The reverse proposition to this is more true. Those who advocate the first proposition do not stop to reflect as to the effect upon the minds of the attempt to merely store them with facts and with words to be filled in after a while, during the first several years of their work.

In the article "Thought in the Primary Work" it was assumed that the first of the four theories there mentioned is the all-prevailing theory. How it came to be held is now the question to be considered. The great majority of our public school teachers go into the school-room with an inadequate idea of the true nature of mind. They think that it can be made to grow as a house is built, i. e., by piling fact upon fact, as brick is laid upon brick; but if one will watch more closely, he will see that it unfolds very much like a plant, i. e., the growth of one organ depends upon the growth of all the other parts. In other words, many fail to see that the mind is organic.

Many teachers conclude they will study the nature of the implements that they are using in their work, and so enter upon the study of Mental Science. Many expressions, such as, "The studies which should be first pursued are those which require and discipline the powers of observation and acquisition," "To stimulate the thought processes to unnatural and prematurely painful efforts is to do violence to the laws which nature has written in the constitution of the intellect," they are not able to interpret, and as a result, the conviction that the first theory is the one to be put into practice is made deeper. Those who read these and kindred passages should hold in mind that those studies that

"require and discipline the powers of observation and acquisition," are also equally well adapted to inculcate habits of accurate thinking concerning the relations involved. This thought should also arise when considering such passages, reflecting on the relations of concrete material is not necessarily an "unnatural and prematurely painful effort" to the child. It is the abstract reflection that is such to the young. This leads to the thought that too many have the idea that in order to use the thought faculties, we must use abstract material. This is not true. Some of the highest processes of thought are performed in the presence of concrete material.

It often seems to be held that the expression, "Accuracy and certainty in thought require a large fund of material," and the expression, "Any employment of the thought processes requires a large fund of material," are identical in meaning. It is a fact that before one can make an entirely trustworthy induction many facts must be learned, and many objects noticed, but the child begins in some degree to discriminate, remember and imagine, and reflect, when but few objects have been presented to his senses. It has been well said, "The child's mind, before he enters school, has not been simply waiting for that store of wonderful facts which the teachers are only too ready to bestow upon him, hoping that he will be content with these, and keep his "inquisitive whys" to himself. He has, before the age of six, acquired a large fund of material upon which he can exercise his thought faculties, and is now ready to know the whys and wherefores of all this material.

If teachers would form a habit of noticing children and their sayings closely, they would find that the child asks questions that bear upon the thought relations, such as, "What makes it rain"? or makes statements that indicate thought, as when he says, upon seeing a broken dish beneath the table, "Some one knocked it off." They fail to see, however, that all such expressions as this last indicate that he has compared, classified, inferred, etc. Hence when questions involving thought are put to them by pupils, they put them off with the answer that they are not able to understand, and so by the time they are eight years old,

they have settled into that state of apathy which we have forced them into.

In our daily life we fail to notice the many little instances, in which the child reasons to a considerable extent. In response to a request for examples of reasoning in children, I received among others the following: "The child-mind can perform an act of deduction, e. g., my little sister is very fond of hearing a certain tune that none of her older sisters played; but whenever her cousin Irene came to visit us, she would play it for her. On one occasion, a stranger came to our house and played the same piece. My little sister, who was in another room, said instantly, "There is Irene." She had heard that tune played by but one person, until she had arrived at the general principle, "No one but Irene plays this piece," "I hear that piece being played," therefore Irene is playing it.

The child-mind can refer an effect to its cause, e. g., On seeing a window-pane broken, a little girl said, "The boys played ball too close, didn't they?"

The first theory, as given in the article "Thought in the Primary Work," seems to have arguments favorable to its prevalence, but it is only a seeming. That the mind is best developed when the strongest effort is employed, is an argument against it.

An argument in favor of the second theory is that a degree of exercise is given to each of the faculties in accordance to the degree in which they are developed; but an argument against it is that all through life, as the organs of the mind grow in proportion to the degree in which they are exercised, the memory, imagination, etc., would be more powerful than the reasoning faculties.

The third theory, i. e., treating each of the faculties in the same manner, resembles the teacher who treats the minds of all her pupils in the same manner. Each mind with its peculiar traits is the subject of the educational process.

The fourth theory is the theory of rational education. Its principles are:—

1. Since the powers of *observation*, *memory*, and *imagination* are spontaneously and prominently active, the peculiar function of the primary teacher is—

- a. To furnish concrete material for the pupil's consideration.
- b. To make it the central aim to awaken, nourish, and discipline to accuracy the thought powers by means of this material.
2. The school work is to be arranged so as to call forth at every step the *maximum effort* on the part of the child.
3. The question in dealing with any idea is not, How can I get the child to comprehend this idea most easily and clearly? but How can I cause this idea to confer the greatest degree of effort and discipline that is appropriate to the child?
4. The principle that *the mind tends to act again as it has*, and to carry any habit that it has acquired in one phase of work into every other phase, indicates clearly the undesirable results to the pupil if the main effort during the first years of school is "to store the mind with knowledge," and the beneficial results if the main effort is to train him to think, to reflect, to be accurate, by means of concrete material.

"EACH AND ALL."

IN stating that the peculiar function of the second year's work in respect to geography is to attach a strong interest to locality by means of a study of the animals, plants, and men of the various regions, the *picture* and *language* were given as the principal instruments. The work on the map and mapping were to be deferred until about the close of the second year.

Under language as an instrument of geography work were included oral and written stories of place, travel, animals, plants, the home life of different peoples.

Among the books mentioned as suitable for second year work was *The Seven Little Sisters*. This, in the form of a story about seven little girls, is an attempt to set forth graphically in a way suitable for little children, the characteristic works of the people and their home life; of the animals and their uses; of the plants and their uses, in the *desert* region, *Arctic* region, *mountainous* region, in South America, in Africa, in China, and in western North America. It was the aim in this book to show the peculiar environment of each of the seven little sisters, and in this

way show the peculiar nature of the chief regions of the earth and of their life forms. Each little girl in her surroundings furnishes a typical scene of a typical region of the earth. But there is a companion book to the Seven Little Sisters. Its title is *Each and All*. In the first book Agoonack proves what she can do. In the companion book the relation that her work bears to the other sisters is shown. It there appears that each works for all and all for each. Indeed, the book *Each and All* conveys in a manner suitable to pupils of the second year grade, the great idea of geography, viz., that the earth is a theatre of a great *exchange*—exchange of ideas and of material products. The world engaged in traffic is the theme of geography. How man ministers to man is best portrayed in that subject. The closing lines of the book indicate this thought:—

“Do you see that the seven little sisters are finding each other out, sending each other presents, sometimes even without knowing it, and doing for each other many little services such as sisters are always glad to do?”

Agoonack has learned from Kudlunah, Manenko from the Bazungu, that in this great wide world, there are many kinds of children, but that one loving Father takes care of them all. * * * But do not think that these little sisters have done nothing for you.

Did not Gemila's caravan carry the gums? Did not Agoonack's father build the snow houses and kill the seals, without which the white men would surely have died? And did not Manenko's people bring the great tusks of ivory? Does not Pen-se tend the silk-worms carefully and well, and so have silk to make ribbons and dresses for you and your mammas?

They each work faithfully and well in their own way; and faithful work, be it the work of the wisest man or a little child, is never wasted or lost. They are all helping each other, as loving sisters should; and perhaps some day they will meet, and will realize how each in her own little way has done some service for the others.”

NUMBER—FIRST YEAR.

To recapitulate—the plan of the first year's work is as follows:

- I. To give three months to the study of Form—number being incidental.

II. To spend seven months in the study of number, that is to endeavor to obtain numerical ideas through concrete objects, the number being limited to *ten*.

The first point in studying a number is to consider it as a group.

The second point is to give each group its appropriate name.

Two as a group—gloves, shoes, horses, oxen, wheels, halves.

Three as a group—clover leaves, triangles, petals of a lily.

Four as a group—sides of a square, legs of a table, wings of a butterfly, beetle, bee, etc.; wagon wheels, feet of a horse, cow, etc.; sides of a room, petals of dog-wood.

Five—fingers, toes, petals of the rose family, arms of the starfish, rays of the sea-urchin.

Six—legs of a fly, beetle, bee, butterfly, petals of the lily family.

Eight—legs of a spider, octagon.

III. The relations which can be discovered in any group.

Any number can be separated into equal parts, into unequal parts, or can be combined with other numbers.

IV. The numbers to ten can be applied to objects, thus:—

1. One cent.
2. Two one cents are two cents.
Two pints are one quart.
Two reams are one bundle.
A sheet folded into two leaves is a folio.
3. Three feet are one yard.
Three feet are one pace.
Three miles are one league.
Three one cents are three cents.
4. Four quarters are one yard.
Four quarters are one dollar.
Four inches are one hand.
Four gills are one pint.
Four pecks are one bushel.
Four quarts are one gallon.
Four weeks are one month.
Four farthings are one penny.
A sheet folded into four leaves is a quarto.
5. Five one cents are five cents.

6. Six feet are one fathom.
7. Seven days are one week.
8. Eight quarts are one peck.
9. Nine square feet are one square yard.
10. Ten mills are one cent.
Ten cents are one dime.
Ten dollars are one eagle.

FANNIE S. BURT.

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

SHORT NOTES.

Love one another but beat one another.—*Col. F. C. Parker.*

THE word *beat* as here used means get a higher percent than others, and as the Colonel himself said, "run home to your mother and tell her to take you to her arms, as you have beaten the whole school."

It is possible to run a race with another and beat him and yet not hate him: but if you beat him every time, it will become monotonous to both.

DON'T FORGET

"To praise as well as condemn." Let the praise come first. Don't make it of the wishy-washy sort either. Let it be solid heart-felt praise. "You did this well. You are improving in this particular, and I am glad to see it."

Let the condemning be such as to show the pupil that he has power to do better, and that you expect him to do so. Let him feel that you have confidence in him, if you have.

THE INFINITIVE.

The infinitive gets more attention than it is worth. Not long ago a pupil gave as an example of the use of an infinitive as an adverb, "John went to town." He stated that the words "to town" were an infinitive used as an adverb modifying *went* by telling where John went. The teacher asked him to use *town*

as a verb. He thought a moment and then smiled a sickly smile and said, "'Taint no infinitive."

STUDYING SPELLING.

Much time is wasted studying spelling. Take any ordinary spelling book and select a lesson. It will be found that only about 30 percent of the words need study. Yet a child is asked to spell every word to himself in his study. Why not ask him to study those that look peculiar to him. No one will miss *snake*, but if it were spelled *psnaque*, (and it is a wonder that it isn't), he might possibly miss it.

READ *to* SOMEBODY.

Have pupils read *to* somebody. It is very hard to read without an audience, either real or imaginary. Many pupils read without either. They simply say the words. Again there are others who read as if they were having a private conversation with the book. A good plan is, to have the pupil step out in front of the school and read to the pupils. If this were done frequently the pupils would improve in their ability to express the sense, especially if the school has books closed.

"6 OVER."

A little girl trying to divide 4200 by 6 said, "6 into 42, seven times; 6 into 0, no times and 6 over."

She evidently had not the idea of "6 over," or of "6 into." The teacher should *take* time to make these expressions mean something. Take 42 tooth-picks and then take six away. Have the pupil count how many times you take six away. "Seven times." Then tell her that "6 into 42 seven times" means what has been done. Now take 47 and go through the same process; then call attention to the fact that there are 5 left. We say this another way, "5 over." Ask the pupil if there *could* be 6 over when dividing by 6. Why?

PERCENTAGE.

THE teacher should see that a pupil beginning percentage does not get the idea that it is unlike anything he has ever had. He is likely to get this idea from the book, and often from the course of study. In the book, the word percentage in heavy black

letters heads a new chapter, and the pupil "turns a new leaf" with fear and trembling, mixed with hope and joy. In the course of study, percentage is often the first subject of a new grade, and the pupil enters a new room with a new teacher at the beginning of a new year. With all this *newness* the teacher will need to use some of the new (?) principles of the new (?) education to prevent the pupil being impressed with a wrong idea.

He should be made to see that percentage is related to fractions, but don't *say related* to him, unless you immediately illustrate what you mean. If you were to say to him that it is "first cousin" to fractions, he would probably get the idea we wish. But it is not what is *said* that produces the greatest effect: it is what is done.

The teacher wishes to teach, for example, that percentage is hundredths of a thing. He may ask such questions as follows:

What part of a dollar is one cent?

What part of a cental is a pound?

What part of a century is a year?

The teacher now has called for what the pupil already knows. He remembers that in a dollar there are a hundred cents; in a cental, a hundred pounds; in a century, a hundred years. From his knowledge of fractions, he answers one-hundredth.

He is then *told* that another way of saying the same thing is to say *one per cent*. Without stopping for a definition the teacher gives such problems as follows:

Find 1% of \$100. 1% of 100 bu. 1% of 100 yrs. 1% of 200 lbs. 1% of 1000 sheep. 2% of 100 trees. There are 50 pupils belonging to school; 4% of them are sick. How many are sick?

This kind of mental work should be kept up until the pupil has a clear idea of what is meant by "*percent*."

The written expression should follow. $\frac{1}{100}$, $\frac{1}{100}$, $\frac{1}{100}$, etc., he already knows. He also knows the decimal expression for the same: so there is nothing new to learn except that *percent* may be expressed either fractionally or decimally.

The next step is to lead him to change fractional expressions to decimal expressions. "What % of 4 apples is $\frac{1}{2}$ of 4?" He fails to see it. "Well, then, what % of 4 apples is *all* of 4 apples?" Doesn't see it yet. "How many hundredths in all of

any thing?" This he *can't* miss. Now ask the above questions in reverse order, and he will be able to answer them. He is then ready for " $\frac{1}{2}$ of an object is what % of it?" Then many of the kind should follow. $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$, $\frac{1}{12}$, $\frac{1}{20}$, $\frac{1}{25}$. Give the percents most commonly used in business. These should receive special attention.

Such problems as follows ought to be solved almost instantly: Bought a horse for \$150, and sold so as to gain $33\frac{1}{3}\%$ of the cost; what did I gain?

CHILD AND PREACHER.

BY EMILIE POULSSON, IN CHRISTIAN BANNER.

There's a meaning in the story
Of the boy of Bethlehem
In the temple with the doctors,
Learning not, but teaching them.
We who think to teach the children
Oft would choose the fitter part
If to them we did but listen
With a humble, reverent heart.

In these latter days, a preacher,
Learned and pious, without doubt,
Willed with burning zeal for sinners
From the Church's fold left out,
Met one day a little urchin,
Playing in the fields alone,
Took his hand, and thus addressed him,
In a stern and solemn tone:—

"Worldly joys, my boy, will vanish,
Perish this poor earthly clod:
Have you saved your soul from torment,
Have you made your peace with God?"
Awe'd at first, the laddie listened,
Till he heard the holy name,
Then a look of glad assurance
O'er his childish features came.

And, all unabashed and earnest
As he confidently smiled,
"Me and God hain't had no trouble!"
Joyfully explained the child,
Then resumed again his playing,
And the preacher bowed his head.
"God in heaven, their angels always
Do behold thy face!" he said.

It is barely possible that teachers as well as preachers might learn some valuable lessons from the children who have had no trouble with God. One of the great mistakes of teachers is not recognizing the Divine in child-nature. Remember a child must be developed according to *his* nature. The method must be for him. He is not for the method.

B.

WITHOUT THINKING.

THERE are some things that should be known so well that when called for they can be given "without thinking." The so-called addition, multiplication, subtraction and division tables are of this class. When one is asked what nine times seven are, it is not expected that he will go through a process of discovery. He is supposed to know it so well that he would give it as quickly as he would give his own name. Teachers should not feel satisfied with their pupils' attainment in this direction until this can

be done. This result can not be reached by saying these tables backwards and forwards. It can only be reached by miscellaneous work. The following will serve as a test on this kind of work, and may be suggestive as well:—

Let pupils take slates and write the answers *only* to these questions dictated by the teacher.

9×7	$49 + 8$
$9 + 7$	$92 + 9$
$8 + 9$	11×11
$71 - 9$	$71 \div 8$
8×7	7×9

When these are answered on the pupils' slates they will appear as follows:—

- | | |
|------------------|------------------|
| (1) 63 | (6) 6 and 1 over |
| (2) 1 and 2 over | (7) 101 |
| (3) 17 | (8) 121 |
| (4) 62 | (9) 8 and 7 over |
| (5) 56 | (10) 63 |

These are dictated so rapidly that time is given to write the answers only.

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another; we can't do it. We will change as often as asked to do so, but must be notified of each change.

O, SAY!—Do you know that I heard the Editor of the Journal say recently that there are a few teachers who subscribed for his paper last year *that have not paid for it yet*—although it was expressly understood that they should pay for it not later than Jan. 1, 1887? He does not think they are dishonest, but he does think they have bad memories. He is considering the propriety of sending a list of such to the county superintendents and asking that some special lessons be given such teachers on *memory*.

THE READING CIRCLE BOARD has spent much time and worked hard to make the course for the coming year attractive and profitable. Let every county superintendent and every teacher take hold and help to make this enterprise a success. The good it can do will depend on the number of persons reached. With a united effort the number of readers can easily be doubled.

THE SPECIAL COURSE of one year for high school and college graduates provided for in the State Normal School is what has been much needed for years. The fact that *seventy-five* graduates were in this course last year proves its popularity. Not every town, or city even, can support its own training school and make its own teachers, and this department will supply the deficiency.

SENSIBLE.—At the commencement exercises of the Mt. Vernon high school the eighteen young ladies of the class wore plain calico dresses, plainly made. Our correspondent does not say what the four boys wore. Plainness of dress on such an occasion is certainly in good taste, and if the plan were generally followed it would remove a burden that can illy be borne by many graduates. Supt. P. P. Stultz deserves credit for the above sensible procedure.

"COUNTRY SCHOOL DEPARTMENT."—This is the name of a *new* department to be added to the JOURNAL, beginning next month (Aug.) While it is true that methods that are good in the city are good in the country, and that country children are very similar to city children in their mental make-up, it is still true that the conditions under which work is done are different, and that the country schools, which are largely in the majority, need some special consideration.

W. H. Caulkins, Supt. of Tippecanoe county, has been engaged to conduct this important department. He is the oldest and one of the most efficient superintendents in the state, and can write from personal experience and personal observation. This department will certainly commend itself to a large majority of Journal readers.

DEMAND FOR LADY INSTRUCTORS IN INSTITUTES.—There is an increasing demand for lady workers in teachers' institutes. As the years go by and there is an increasing demand for experienced workers and better work, superintendents feel called upon to go outside for at least a part of their work. Whereas a few years ago the employment of regular workers from outside the county was the exception, now it is the general rule. As a result persons who have made special preparation and do acceptable work find ready employment during the institute season. During the late Superintendents' Convention the writer had numerous inquiries for good lady instructors—especially for primary work. The Journal calls upon the ladies to make the necessary special preparation and occupy this field.

THE NATIONAL EDUCATIONAL ASSOCIATION.

The prospects are good for a large attendance at the National Association which will open in Chicago July 12th. Considering the short distance, the small cost, the association itself, the attractions of Chicago, and the facilities for excursions from there, it would seem that Indiana teachers should attend in large numbers. This national meeting, at which can be seen so many of the great lights of the profession, is not likely to come so near again for years.

All the principal roads leading to Chicago will sell round trip tickets for a single fare *plus* two dollars, which pays your membership fee to the association and secures to you a neatly bound copy of the addresses and proceedings of the convention. The fare from Indianapolis is \$5.50, plus the \$2.00. Tickets good going from July 6 to 13 inclusive.

The most desirable routes from Indianapolis are by either the "Monon" or the "Pan-Handle," if teachers desire to go by daylight. On each road a train leaves about noon and reaches Chicago in time for supper. The I. B. & W. Road runs a through sleeper at night at a lower rate than either of the other roads.

THE HOTEL BREVORT will be headquarters for Indiana teachers, as announced last month. This hotel is kept on the European plan, and has recently been re-modeled and re-furnished. By special agreement rooms can be had at 75 cents a day. There is a good restaurant connected with the hotel. One advantage in stopping at a hotel of this sort is that you pay only for what you get, and if you do not happen to be there at meal time you can eat at any of the many excellent cheap restaurants for which Chicago is noted. It is best to write and engage rooms in advance, and thus save trouble.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR MAY.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

GEOGRAPHY.—1. Bound Iowa: locate its capital and its metropolis.

2. When it is noon in Indiana, is it day or night in Patagonia? In Japan? In Australia? Explain this.

3. Describe the effect of the Gulf Stream on the climate of Europe.
4. What are the chief exports of Kentucky?
5. What cities would one pass on a steamboat voyage from Pittsburg to Memphis? In what state is each of the cities mentioned?
6. Name the chief kinds of trees characteristic of temperate regions.
7. What is the form of government of Norway?
8. Describe a glacier.
9. What is the highest mountain in the United States?
10. Describe the Sahara.

ARITHMETIC.—1. A farmer has three piles of wood, each 4 ft. wide and 6 ft. high, and in length 100, 150 and 200 ft. respectively. What is the value of the whole at \$3 for each 108 cubic feet? 5, 5.

2. $\frac{1}{2}$ Solve by analysis, and show why the common rule is right. 3, 3, 4.

3. A man bought 400 books at $12\frac{1}{2}$ cents each, 600 at $33\frac{1}{3}$ cents each, and 200 at $66\frac{2}{3}$ cents each; what did they all cost? 5, 5.

4. A mass of dough 3 ft. long, 2 ft. wide, and 1 ft. thick was made into loaves each 9 inches long, 6 in. wide, and 3 in. thick; how many loaves did it make? Solve by cancellation. 5, 5.

5. How many hours will there be in the month of Feb. 1900? 5, 5.

6. What is the interest on \$1,111 for 3 years, 3 months and 3 days at 6% per annum? 5, 5.

7. Walking 6 hours a day 6 days in a week for 4 weeks A can walk 432 miles; at the same rate, how many miles can he walk in 6 weeks, walking 9 hours a day for 4 days in a week? 5, 5.

8. A piece of land has 2 sides parallel, one 150 feet long and the other 250 feet long, and the shortest distance between these sides is 54.45 ft.; what part of an acre does the piece contain? 5, 5.

9. A block of marble 3 ft. long, $1\frac{1}{2}$ ft. wide, and 1 ft. thick weighs 540 lbs.; what will a block of the same density weigh that is twice as large each way? 5, 5.

10. A house standing on a corner is 60 ft. high and the streets 80 feet wide; what is the length of a rope that will stretch from the top of the corner of the house to the ground at the diagonally opposite corner? 5, 5.

Answer any seven; 15 percent off for any incorrect.

READING.—1. State two objections to concert reading. Two arguments in favor of it.

2. Which ought to receive the most attention, oral or silent reading? Why?

3. Name three purposes for which the dictionary should be used in the preparation of a Fifth Reader lesson. How do you teach the use of a dictionary?

4. How can the reading lesson be used as a basis for the language work?

5. Name an American author and his work suitable for a pupil in each of the following grades: second, third, fourth, fifth.

ENGLISH GRAMMAR.—1. Give a classification of sentences and the basis upon which it is made.

2. As what parts of speech may the word *there* be used in the sentence? Give an example of each use, and designate.

3. State the likeness and difference between the sentence and the clause.

4. What classes of nouns do not have plurals? Why?

5. How do you determine each of the grammatical properties of *which* in the following sentences: The apple *which* fell is ripe. The books *which* I bought were lost.

6. What distinguishes the conjunctive adverb from other adverbs?

7. When does the collective noun require the verb of which it is the subject to be plural? When singular? Illustrate.

8. Correct and give reasons for corrections: (a) Them boys is too noisy. (b) He don't like those kind of peaches.

9. Analyze: *Silently, one by one*, in the infinite meadows of heaven, blossomed the lovely stars, the *forget-me-nots* of the angels.

10. Parse the italicized words in the last sentence.

PHYSIOLOGY.—Discuss the subject of ventilation, using the following outlines:

1. Impurities produced through respiration.

2. Effect on the health if such impurities are again taken into the system.

3. Arrangements by which pure air may be made to take the place in a room of the air made impure by respiration.

4. Dangers of producing a draught through excessive ventilation.

5. Close by such practical suggestions as your experience may enable you to give to those teachers who teach in buildings in which no regular system of ventilation is provided in the construction of the building.

U. S. HISTORY.—1. Give the principal facts connected with the first battle of the Revolutionary War.

2. Name the last five Presidents of the United States, and mention some important event associated with the administration of each.

3. Give an account of Lewis and Clarke's expedition.

4. Give an account of Arnold's treason.

5. Name four European nations that claimed parts of North America. State what parts each claimed, and upon what its claims were based.

6. Describe the course of a bill through Congress from its introduction until it becomes a law.

NOTE.—Answer any five.

SCIENCE OF EDUCATION.—1. Define attention. Name some of the most important external or physical conditions of attention. Name the most important mental conditions of attention.

2. State any of the leading educational doctrines or views of either Pestalozzi or Froebel.

3. What should be the aims in teaching writing in the public schools?

4. What is meant by the method of development? By the method of instruction?

5. Describe the effects of either method pursued to the entire exclusion of the other.

ANSWERS TO PRECEDING QUESTIONS.

ARITHMETIC.—1. $100 \text{ ft.} + 150 \text{ ft.} + 200 \text{ ft.} = 450 \text{ ft.}$, length.

$$\frac{4 \times 6 \times 450 \times \$3}{108} = \$300, \text{ cost. Ans.}$$

2. $1 + \frac{1}{2} = 9$; $\frac{1}{2} + \frac{1}{2} = \frac{1}{2}$ of $\frac{1}{2}$, the divisor inverted, which is $\frac{1}{2}$, or $1\frac{1}{2}$.

3. $12\frac{1}{2}\% = \$\frac{1}{8}$; $33\frac{1}{3}\% = \$\frac{1}{3}$; $66\frac{2}{3}\% = \$\frac{2}{3}$. $400 \times \frac{1}{8} = \50 ; $600 \times \frac{1}{3} = \200 ; $200 \times \$\frac{2}{3} = \$133\frac{1}{3}$; $\$383\frac{1}{3}$, cost of all.

$$\frac{36 \text{ in.} \times 24 \text{ in.} \times 12 \text{ in.}}{9 \text{ in.} \times 6 \text{ in.} \times 3 \text{ in.}} = 64 \text{ loaves. Ans., 64 loaves.}$$

5. $24 \text{ hr.} \times 28 \text{ (da.)} = 672 \text{ hr. Ans.}$

6. 3 yr. = .18 of principal.

$$3 \text{ mo.} = .015$$

$$3 \text{ da.} = .0005$$

$$.1955 \text{ of principal.}$$

.1955 of \$1111 = \$217.20, interest. Ans.

7. $\frac{432 \text{ miles}}{6 \times 6 \times 4} = 3 \text{ miles, hourly walk.}$

$$6 \times 9 \times 4 \times 3 \text{ miles} = 648 \text{ miles. Ans.}$$

8. $150 \times 54.45 = 8167.5 \text{ sq. ft.}$

$$\frac{1}{2} \text{ of } (100 \times 54.55) = 2722.5 \text{ sq. ft.}$$

$$8167.5 \text{ sq. ft.} + 2722.5 \text{ sq. ft.}$$

$$10890 \text{ sq. ft., area of land.}$$

$$10890 \text{ sq. ft.} = 40 \text{ sq. rd.}$$

$$40 \text{ sq. rd.} \div 160 \text{ sq. rd.} = \frac{1}{4} \text{ acre. Ans., } \frac{1}{4} \text{ A.}$$

9. 3 ft. length, $\times 1\frac{1}{2}$ ft. width, $\times 1$ ft. thickness, $= 4\frac{1}{2}$ cu. ft.

$$540 \text{ lb.} \div 4.5 \text{ cu. ft.} = 120 \text{ lb., weight of 1 cu. ft.}$$

$$6 \text{ ft. length} \times 3 \text{ ft. width,} \times 2 \text{ ft. thickness,} = 36 \text{ cu. ft.}$$

$$36 \times 120 \text{ lb.} = 4320 \text{ lb. Ans., 4320 lb.}$$

10. $\sqrt{(60^2 + 80^2)} = 100 \text{ ft.}$

$$\sqrt{(100^2 + 80^2)} = 128.06 \text{ ft. Ans., 128.06 ft.}$$

HISTORY.—1. The condition of things existing in the colonies in the early part of 1775 led the inhabitants of Massachusetts to lay up stores, in preparation for times of trouble at Concord, not many miles from Boston. Gen. Gage, having learned of it, ordered a secret expedition of 800 men to destroy them. This came to the knowledge of

the colonists, and the minute men were summoned to protect them as far as possible. These minute men, to the number of about 60, were met by Major Pitcairn with his company at Lexington. Pitcairn ordered his men to fire, which they did, killing eight, wounding many, and dispersing the remainder. They then marched to Concord, drove off the minute men collected there, and destroyed the stores. Returning to Boston, they found the whole country excited and armed. Bells rang, and every means was taken to bring the colonists together, and with such effect that they harassed the British more and more until at last they broke into a run, reaching Boston exhausted, with tongues parched and protruding, having suffered a loss of nearly three hundred men, while that of the colonists was less than a hundred, and all this though the British were reinforced by over 900 men.

2. (1) Grant, from 1869 to 1877. The Geneva Arbitration, which settled the Alabama Claims, and the adoption of the 15th Amendment, making suffrage virtually universal.

(2) Hayes, from 1877 to 1881. The demonetization and remonetization of silver, and the resumption of specie payments.

(3) Garfield, from March 4, 1881, to September 19, 1881. The most important event was the assassination of the President in July, 1881.

(4) Arthur, from September 1881, to 1885. The Yorktown celebration, and the adoption of civil service reform.

(5) Cleveland, from 1885. The more complete harmony of the interests of the North and South, with the largely increased manufacturing efforts of the latter.

3. Jefferson having in 1803 acquired the Louisiana Territory by purchase from Bonaparte, and desiring to have the country lying between this purchase and the Pacific Ocean explored, ordered, in 1804, an expedition for that purpose, under charge of Lewis and Clarke. These men crossed the Rocky Mountains, really the western boundary of the Louisiana purchase, explored the upper Missouri and Columbia Rivers, with all the territory adjacent to them, until they reached the Pacific. claiming the country explored for the United States, a claim which was resisted by Great Britain, who claimed a portion of it as having been explored by the Hudson Bay Co. The boundary was settled by arbitration and treaty in 1846.

4. Arnold, dissatisfied with the treatment which he had received after the battle of Saratoga and the surrender of Burgoyne and the result of the court martial, and acting, as some thought, under the influence of his wife, but for which opinion there seems no ground, entered into a secret correspondence with Sir Henry Clinton, who sent Maj. John Andre to negotiate for the traitorous surrender of West Point. Meeting outside of the American lines daybreak came before the negotiation was ended, and Arnold giving the pass-word they entered the

lines, Andre being disguised. The agreement having been made between them and the plan of operations secreted in Andre's stocking, he passed the American lines in safety, but was arrested near Tarrytown by three militiamen, Van Wert, Paulding and Williams, who delivered him to Col. Jameson. The Colonel notified Arnold that John Anderson had been taken with dangerous papers on him, whereupon Arnold fled and reached the Vulture in safety.

5. (1) English, who claimed the larger part of the thirteen original colonies by reason of discovery and settlement. From this territory is to be excepted what was (2) claimed by the Dutch, namely, New York, part of New Jersey, and a small part of Connecticut, their claim being based on the same foundation as the English to the remainder. (3) The French, who claimed the Canadas and almost the whole of the Mississippi Valley, on the ground of early discovery and settlement, but largely on the grant of the Pope to the Jesuits, who traversed the whole country in the interests of the church. (4) The Spanish, who claimed the Florida peninsula and Mexico, with a very large part of what now constitutes the great Western Territories, their claim being much of the same character as that of the French.

6. Except bills for raising revenue, a bill may originate in either house of Congress. When proposed it must be read, and under present rules referred to the proper committee. When reported on it may be taken up by the house, read a second time, and by a unanimous vote read a third time and acted on; or it may be postponed till another day, or still further it may be referred to a committee of the whole, upon whose report action may be taken. When passed in the original house it is sent to the other house, where it is acted on in much the same manner. If amended it is returned to the house in which it originated, and if the amendments are concurred in it becomes a law, so far as Congress is concerned. If amendments are not concurred in a committee of conference may act upon it, and if their report is agreed to by both houses it is sent to the President for his action. If approved by him it becomes a law. If returned within ten days—Sundays excluded—with his disapproval, to the house in which it originated, it may be passed over his veto by a two-thirds vote of both houses, and become a law. If not returned within ten days it becomes a law without further action.

PHYSIOLOGY.—*Ventilation.* No more important subject bearing upon the physical welfare of the pupil can be considered by the teacher. Air passing out from the lungs of the pupil is unfit to be used till purified. Atmosphere in which are these noxious particles is injurious to *health*. It is also injurious to the *order* of the school, rendering the pupils restless. It is also injurious to the *work* of the school, unfitting the pupil for that interest and attention which is necessary to suc-

cessful effort. It is better to prevent than to cure. Here is the true test of management.

In warm weather, air may be kept pure by raising the windows at the bottom and lowering them at the top, and by having a flue open near the ceiling. In cold weather direct drafts should be avoided. Let the stove be upon one side of the room, and a double flue upon the other. Run the pipe into one flue, have a small door in the other, so that a current of impure warm air may go out the chimney. Let pure cold air come in under the floor, pass up around the stove (placed in a jacket of sheet-iron), and thus into the room as warm pure air. Openings near the bottom of the stove are useful. A draft upon the pupil cools too rapidly and often lays the foundation of disease. Thermometers should be kept 30 inches above the floor, and the temperature here should not be less than 70° F.

Ventilation may sometimes be secured without a draught by lowering the top sash six inches, and placing a board above it,—the air coming in between the upper and lower sash. It is as important to arrange for the bad air to get out as for the good air to get in.

READING.—1. Concert reading may be objected to, (1) because it is imitative, and therefore not based upon a right principle; (2) because the teacher is often uncertain whether every pupil is reading correctly, or what pupil is reading incorrectly. It may, however, give confidence to diffident pupils and suggest modulations of the voice to accompany certain thoughts or emotions.

2. In teaching the *art* of reading—*i. e.*, of giving proper utterance to words in order to convey thought to another, *oral* reading is most important. Made tolerably skillful here, however, the attention and the effort of the pupil should be given to *silent reading*, or the power quickly to grasp the meaning or sentiment of another and readily to translate that into one's own thought and emotion. The most of our reading is silent reading,—must be, of necessity, and hence the importance of skill and power in interpretation.

3. To get the varied meanings of words; to make nice discrimination in the selection of words; to enable one to make words fit each other in the expression of thought quickly, skillfully, with delicacy yet with power.

4. (1) By having pupils give orally the substance of the lesson; (2) by having pupils take certain words in the lesson and use them in original sentences (*a*) with the same meaning, (*b*) with a different meaning; (3) by discursive lessons into history, biography, geography, botany, zoölogy, etc., suggested by and designed to make clearer the meaning of the selection read.

5. (*a*) Anna Dickinson; (*b*) Louisa M. Alcott; (*c*) Abbot; (*d*) Hawthorne.

SCIENCE OF EDUCATION.—1. Attention may be roughly defined as the active self-direction of the mind to any material or object which presents itself to it at the moment.—*Sully*.

There must be something striking in the object itself, and the organs of the senses must be in a healthful condition. There must be a motive in the mind that will prompt it to put forth the attention in a certain direction.

2. Fröbel says: "Education in its totality is to raise to consciousness in man, and to make efficient in life, the fact that man and nature proceeded from God, are limited by him, and rest in him."

3. To teach the pupils to write easily and rapidly a hand-writing that can be read with ease.

4. Leading the child to see the new by showing him how it is related to what he already knows. Telling the pupil facts.

5. When development is employed to the exclusion of instruction, it often happens that there is no fact in the mind of the pupil to develop, therefore time is wasted and nothing accomplished.

"Instruction" used exclusive of the "development" makes parrots of the pupils. They gain no power of independent thought.

GEOGRAPHY.—1. Iowa is bounded on the north by Minnesota; east, by Wisconsin and Illinois, the Mississippi River separating it from these states; south, by Missouri; west, by Dakota and Nebraska: the Missouri River separates it from Nebraska, and the Big Sioux River from Dakota. Des Moines, the capital, is situated south of the centre of the state, on the Des Moines River. Des Moines is now the largest city in the state.

2. It is day in Patagonia; night in Japan and Australia. Owing to its revolution on its axis, 180 degrees of the earth's surface are lighted by the sun's rays at one time, while the opposite half of the earth is in darkness. Patagonia is in the same hemisphere of illumination as Indiana; while Japan and Australia are in the opposite hemisphere.

3. The effect of the Gulf Stream is so to moderate the climate of Europe as to make it several degrees warmer than the corresponding latitudes of the American shores of the Atlantic.

4. The chief exports of Kentucky are tobacco, hemp, flax, horses, mules, hogs, cattle, bagging, and rope.

5. Wheeling and Parkersburg in West Virginia; Steubenville, Marietta, Cincinnati in Ohio; Newport, Covington, Louisville, and Paducah in Kentucky; New Albany and Evansville in Indiana; Cairo in Illinois.

6. Oaks, elms, maples, beeches, walnuts, chestnuts, birches; the ash, larch, linden, sycamore, alder; with the apple, pear, cherry, plum, and peach.

7. Limited monarchy. Norway and Sweden are united under one king, but each country has its own legislative body.

8. A glacier is a vast stream of ice formed in a region of perpetual snow, and moving slowly down a mountain slope or valley. It usually terminates in a wall of ice, from beneath which the waters of the melting glacier escape.

9. Mt. Whitney, in the Sierra Nevada Range.

10. The Sahara is a vast desert of sand or hardened clays, with naked rock. It occupies about one-fifth of Africa. It is almost rainless, but contains some scattered oases.

GRAMMAR.—I. According to their use, sentences are divided into: 1. Declarative. 2. Interrogative. 3. Imperative. 4. Exclamatory. According to their structure, into: 1. Simple. 2. Complex. 3. Compound.

2. 1. As an expletive; as, "*There* being no quorum present, the council adjourned." 2. As an adverb of place; as, "*There* the General resolved to make a stand, and *there* to engage the enemy."

3. A sentence expresses a complete thought. A clause is a part of a sentence, and does not express a complete thought. Each has a subject and predicate.

4. The names of materials, qualities, or sciences can have no plurals ordinarily; as, flour, honesty, molasses, optics, etc. Some of them are pluralized when different kinds of the same material are meant; as, teas, coffees, tins, etc.

5. 1. *Which* is neuter, singular, to agree with its antecedent *apple*, and in the nominative case, subject of the verb *fell*. 2. *Which* is neuter, plural, to agree with its antecedent *books*, and object of the verb *bought*.

6. It is used as a connective in subordinate clauses.

7. A collective noun is plural when the individuals composing the collection are thought of. Singular, when they are referred to as a unit. The collective noun may also have the plural form:—

1. The committee were unable to agree.

2. The committee was discharged.

3. Several committees were appointed.

8. *a. Those* (or these) boys *are* too noisy. *b. He* does not like that kind (or those kinds) of peaches.

9. This is a simple declarative sentence. *The lovely stars, the forget-me-nots of the angels*, is the logical subject; *silently, one by one, blossomed in the infinite meadows of heaven*, is the logical predicate. *Stars* is the subject nominative; *blossomed* is the predicate verb. *Stars* is modified by *the* and *lovely* (adjectives), and by the appositive, *forget-me-nots*, which is modified by *the*, and by the prepositional phrase, *of the angels*. *Blossomed* is modified by the adverb *silently*, and by the adverbial phrases, *one by one*, and *in the infinite meadows of heaven*, etc.

10. *Silently* is an adverb of manner, modifying the verb *blossomed*. *One by one* is an adverbial phrase expressing manner, used to modify the verb *blossomed*. *Blossomed* is a verb, regular, intransitive, indicative, past, third, plural, agreeing with its subject, *stars*. *Stars* is a noun, common, third, plural, neuter, nominative, used as the subject of the verb *blossomed*. *Forget-me-nots* is a noun, common, neuter, third, plural, nominative, in apposition with the noun *stars*.

DEPARTMENT OF QUERIES AND ANSWERS.

[This Department is conducted by J. C. GREGG, Superintendent of the Brazil Schools.
Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

[5.] Why is the object of the infinitive mode in the objective case?
O. H. D., *Beechy Mire, Ind.*

[6.] "He that is unjust let him be unjust still." What is the construction of *he* and *him*?
Id.

[7.] If $\frac{7}{8}$ of the price of a horse is equal to $\frac{3}{4}$ of the price of a saddle, and they are together worth \$185; what is the value of each?
S. D. CLARK, *Carthage, Ind.*

[8.] Who is the author of the following lines?

"Danger flies from the uplifted sword,
They best succeed who dare."

[9.] In the questions for state license as given in the report of the State Superintendent for 1885 and 1886, in the botany list is the following: "Describe the life history of *Spirogyra*."
Who will answer?
Ed.

We trust that our readers will keep us supplied with interesting queries.

ANSWERS.

[1.] *a.* "Present" is a descriptive adjective, common, not compared, positive degree, used in the predicate with "will be," and modifies "people." *b.* "Alone" is a definitive adjective, used with "stood," an intransitive copula, and modifies "secretary." Or it may be parsed as an adverb modifying "stood" in the sense of "by himself." *c.* "Alone" is a definitive adjective, used in the predicate with "lies," an intransitive copula, and modifies "happiness." The punctuation will allow the adverbial use.

SAMUEL E. HARWOOD, *Spencer, Ind.*

[2.] There are 47 prime numbers from 1 to 200, as follows:

1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, and 199.

S. D. CLARK.

[3.] Let $x - y$ = the width.

x = the length.

and $x + y$ = the diagonal.

Then $(x - y)^2 + x^2 = (x + y)^2$;

or $x^2 = 4xy$ and $x = 4y$ (1).

Also the area = $x(x - y) = 3468$ (2).

From (1) and (2) $x = 68$

$y = 17$

$x - y = 51$, the width.

$x = 68$, the length.

$x + y = 85$, the diagonal.

ED.

Solved also by Harwood and Clark.

[4.] Teach process only. Long division is mechanical work. Accuracy and rapidity in operations are the ends sought. Memory is the vigorous faculty. Reason is weak. Process appeals to the former; anything more demands reason. If a pupil asks more, give it.

SAMUEL E. HARWOOD.

READING CIRCLE NOTES.

1. Lawrence county's membership is 76, instead of 32, as published in last month's Journal.

2. Spencer county reports additional memberships, making 71 now enrolled.

3. The books adopted for next year are "Sully's Hand-book of Psychology," published by D. Appleton & Co. It will be furnished to teachers for \$1.10 net if ordered in quantities, and if by mail \$1.23. It may be ordered from the Western Agency at Chicago, C. E. Lane, Manager.

The book on Literature is entitled, "The Light of Two Centuries," published by A. S. Barnes & Co., of Chicago. The price will be \$1.25 if ordered in quantities, parties ordering paying expressage; and \$1.40 pre-paid by mail. Cyrus Smith, of Indianapolis, is agent for Indiana.

4. The membership fees and fees for examination have been abolished for this year, and the reduction in the price of books is such as insure the cheapest course of the series, yet all the freshness and value to the teacher is maintained.

MISCELLANY.

THE KENTUCKY STATE TEACHERS' ASSOCIATION will be held in Louisville July 7, 8, and 9.

THE AMERICAN ASSOCIATION for the Advancement of Science will hold its 36th meeting in New York, August 16th.

THERE are contests in seven counties over the selection of county superintendents, growing out of the late appointments.

ANTIOCH COLLEGE, of Yellow Springs, Ohio, (Horace Mann's old college), has just closed a very successful year, under the presidency of D. A. Long, D. D.

THE STATE NORMAL, on June 10th, graduated a class of 27, closing a prosperous year's work. The spring term showed the largest enrollment of any in the history of the school.

Adolph Rogers, Esq., of New Castle, delivered an address before the Alumni Association of the high school of his city, which is far above the ordinary and deserves special mention.

DE PAUW UNIVERSITY, on June 23, held its 48th annual commencement, and two days before celebrated the *fiftieth* anniversary of the founding of the college. It was never before so prosperous.

THE INDIANAPOLIS SCHOOL BOARD some time ago, in trying to economize, decided to suspend the training school, but it later reconsidered this action and re-elected Miss Mary E. Nicholson as principal.

UNION CHRISTIAN COLLEGE, at Merom, Ind., has just inaugurated a new President, Rev. — Aldrich. President Aldrich is a graduate of Oberlin, and makes a favorable impression upon every one who meets him.

State Supt. H. M. La Follette distributed on May 1, \$1,034,440 of public school revenues. The total number of children in the state between the ages of 6 and 21 years is 760,178, and the amount of the distribution per capita is \$1.36.

DE PAUW NORMAL SCHOOL. — Arrangements have been made whereby a model-school will be connected with the normal hereafter. A model-school that is a model school is certainly a valuable auxiliary to the teaching of methods. To see a theory applied is the only way by which it can be made perfectly clear.

OUR DUMB ANIMALS, is the name of a paper published in Boston, by Geo. T. Angell, the great purpose of which is to teach kindness to dumb animals. Teachers should devise some way to put at least one copy in every school.

"I will not enter on my list of friends,
Though graced with polished manners and fine sense,
Yet wanting sensibility, the man
Who needlessly sets foot upon a worm."

— *Crowther*.

COUNTY SUPERINTENDENTS' CONVENTION.

The annual meeting of County Superintendents was held in Indianapolis June 15 and 16. J. A. Marlow was the presiding officer, and Calvin Moon was secretary. The meeting was one of the most profitable and largely attended meetings of the kind ever held in the state. Eighty-four of the ninety-two counties were represented by as many county superintendents, while two counties, Miami and Fayette, had two representatives each, there being a contest pending in these two counties.

The committee on forms of license recommended that the common school license be graded, as heretofore, with certain alterations, the "Grade of Scholarship" to be made upon a scale of 100; such average scholarship to be obtained by adding the percents attained by the applicant in the eight common branches, theory of teaching, and the literary review or essay. To this average scholarship the "Success" of the applicant is to be added and the sum thereof divided by two, to obtain the "General Average." Primary certificates of license to teach in the first, second, third, and fourth years of town and city graded schools to be issued in the same form, with the substitution in the grading of the term "Language" for "Grammar," and with a proper space thereon for a statement of the "Special Professional Training" of the primary teacher receiving such license. After a brief discussion the above report was adopted.

The committee on forms for reports from teachers to county superintendents and to trustees, and records for county superintendents, recommended that the former be of uniform size and make-up, and so arranged that they may be bound and kept in the county superintendent's office for reference; that a record book for county superintendents be devised. The report was adopted, and the committee ordered to report forms for a record for county superintendents at the next meeting.

The following report of the committee on resolutions was adopted:

Resolved, That we heartily indorse the action of the State Board of Education in its recent order providing for a special examination and license of primary teachers.

Resolved, That we commit ourselves heartily to the cause of the Indiana State Teachers' Reading Circle, and that we use our utmost endeavors to increase the membership and general usefulness of the work in our several counties.

Resolved, That it is the sense of this body that the Legislature of Indiana ought to pass a bill at its next regular session requiring a compulsory attendance upon the common schools of the state.

Resolved, That we, the county superintendents of Indiana, in a body assembled, respectfully request the State Board of Education to make

the following modifications regarding "reviews" as a feature of examination work, viz:

(1.) That the book upon which applicants shall be required to be examined shall be specified in advance, naming a certain book for each month in the year.

(2.) That the applicant shall be required to answer, in addition to the other questions submitted, five questions prepared by the State Board on the book reviewed, provided that the other work of the examination be curtailed so that the whole work required shall not exceed the amount of work at present required.

Officers for the ensuing year: President, Hon. H. M. La Follette; 1st Vice-President, C. M. Merica, of De Kalb county; 2d Vice-President, A. N. Crecraft, of Franklin; Secretary, H. D. Vories, of Johnson; Treasurer, S. N. Cragun, of Boone.

LIST OF COUNTY INSTITUTES TO BE HELD.

- July 25—Gibson county, Princeton. W. D. Robinson, Supt.
- " —Putnam county, Greencastle. L. E. Smedley, Supt.
- August 1—Bartholomew county, Columbus. James W. Wells.
- " —Henry county, New Castle. William R. Wilson.
- " —Lawrence county, Mitchell. David H. Ellison.
- " —Parke county, Rockville. W. H. Elson.
- " 8—Delaware county, Muncie. John O. Lewellen.
- " —Grant county, Marion. Elmer O. Ellis.
- " —Tipton county, Tipton. J. E. Fish.
- " 15—Davies county, Washington. Peter R. Wadsworth.
- " —Harrison county, Corydon. C. W. Thomas.
- " —Huntington county, Huntington. Oliver Kline.
- " —Miami county, Peru. W. A. Woodring.
- " —Rush county, Rushville. W. H. Meredith.
- " —Clark county, Jeffersonville. Elmer E. Martin.
- " —Hendricks county, Danville. Thomas A. Gossett.
- " 22—Boone county, Lebanon. S. N. Cragun.
- " —Clay county, Center Point. W. H. Chillson.
- " —Crawford county, Marengo. W. A. Pierson.
- " —Floyd county, Scottsville. Levi H. Scott.
- " —Franklin county, Brookville. A. N. Crecraft.
- " —Jasper county, Ressler. John F. Warren.
- " —Madison county, Anderson. Willis Ellis.
- " —Marion county, Indianapolis. W. B. Flick.
- " —Montgomery county, Crawfordsville. W. W. Ewing.
- " —Owen county, Spencer. George M. Williams.
- " —Randolph county, Winchester. J. W. Denny.
- " —Shelby county, Shelbyville. Lester Clark.
- " —St. Joseph county, South Bend. Calvin Moon.
- " —Wabash county, Wabash. John N. Myers.
- " —Knox county, Vincennes. W. H. Johnson.
- " —Warrick county, Boonville. R. D. Miller.
- " 29—Clinton county, Frankfort. C. A. Amos.
- " —Elkhart county, Goshen. S. F. Spohn.

- August 29—Greene county, Bloomfield. John T. Lamb.
 " —Hancock county, Greenfield. W. H. Glasscock.
 " —Howard county, Kokomo. John W. Barnes.
 " —Kosciusko county, Warsaw. E. J. McAlpine.
 " —La Grange county, La Grange. E. G. Machan.
 " —Marshall county, Plymouth. W. E. Bailey.
 " —Morgan county, Martinsville. James H. Henry.
 " —Vanderburg county, Evansville. John W. Davidson.
 " —White county, Monticello. John H. Rothrock.
 September 5—Hamilton county, Noblesville. Elias A. Hutchins.
 " —Scott county, Scottsburg. Wm. M. Whitson.
 [October 24—Benton county, Fowler. B. F. Johnson.
 November 7—Steuben county, Angola. Robert V. Carlin.
 December 19—Porter county, Valparaiso. Homer W. Porter.
 " 26—Whitley county, Columbia City. Alexander Knisely.

LIST OF COUNTY SUPERINTENDENTS OF INDIANA.

Elected June 6, 1887, for a term of Two Years.

COUNTY.	NAME.	POST OFFICE.
Adams.....	J. F. Snow.....	Decatur.
Allen.....	Geo. F. Felts.....	Fort Wayne.
Bartholomew.....	*Jas. W. Wells.....	Columbus.
Benton.....	B. F. Johnson.....	Fowler.
Blackford.....	*Chauncey E. Edwards.....	Hartford City.
Boone.....	*S. N. Cragun.....	Lebanon.
Brown.....	Chas. W. Snyder.....	Nashville.
Carroll.....	J. L. Johnson.....	Burlington.
Cass.....	David D. Fickle.....	Logansport.
Clark.....	*Elmer E. Martin.....	Charlestown.
Clay.....	*W. H. Chillson.....	Clay City.
Clinton.....	*C. A. Amos.....	Frankfort.
Crawford.....	*W. A. Pierson.....	Marengo.
Daviess.....	*Peter R. Wadsworth.....	Washington.
Dearborn.....	*Samuel J. Houston.....	Sparta.
Decatur.....	*John W. Jenkins.....	St. Paul.
Dekalb.....	C. M. Merica.....	Auburn.
Delaware.....	John O. Lewellen.....	Muncie.
Dubois.....	A. M. Sweeney.....	Jasper.
Elkhart.....	S. F. Spohn.....	Goshen.
Fayette.....	*Frank G. Hornung.....	Connersville.
Floyd.....	Levi H. Scott.....	Scottsville.
Fountain.....	*James W. Brissey.....	Covington.
Franklin.....	A. N. Crecraft.....	Brookville.
Fulton.....	*A. J. Dillon.....	Rochester.
Gibson.....	W. D. Robinson.....	Princeton.
Grant.....	*Elmer O. Ellis.....	Marion.
Greene.....	John T. Lamb.....	Bloomfield.
Hamilton.....	Ellis A. Hutchens.....	Noblesville.
Hancock.....	W. H. Glasscock.....	Greenfield.
Harrison.....	C. W. Thomas.....	Corydon.

* Newly Elected Superintendents.

Hendricks.....	*Thomas A. Gossett	Jamestown.
Henry.....	William R. Wilson.....	New Castle.
Howard.....	John W. Barnes.....	Kokomo.
Huntington.....	*Oliver Kline.....	Huntington.
Jackson.....	*W. B. Black.....	Brownstown.
Jasper.....	*John F. Warren.....	Rensselaer.
Jay.....	W. J. Houck.....	Portland.
Jefferson.....	*W. M. Amsden.....	Creswell.
Jennings.....	S. W. Conboy.....	Vernon.
Johnson.....	H. D. Vories.....	Franklin.
Knox.....	*W. H. Johnson.....	Bicknell.
Kosciusko.....	*E. J. McAlpine.....	Warsaw.
LaGrange.....	E. G. Machan.....	LaGrange.
Lake.....	Frank E. Cooper.....	Crown Point.
LaPorte.....	*Oliver Galbreath.....	LaPorte.
Lawrence.....	David H. Ellison.....	Mitchell.
Madison.....	*Willis Ellis.....	Anderson.
Marion.....	W. B. Flick.....	Indianapolis.
Marshall.....	*W. E. Bailey.....	Plymouth.
Martin.....	W. T. Mitchell.....	Dover Hill.
Miami.....	*W. A. Woodring.....	Peru.
Monroe.....	*John W. Craven.....	Bloomington.
Montgomery.....	*W. W. Ewing.....	Crawfordsville.
Morgan.....	James H. Henry.....	Martinsville.
Newton.....	Will H. Hershman.....	Kentland.
Noble.....	W. B. Van Gorder.....	Albion.
Ohio.....	*Grant Deweese.....	Rising Sun.
Orange.....	George W. Fawcett.....	Paoli.
Owen.....	*George M. Williams.....	Spencer.
Parke.....	W. H. Elson.....	Rockville.
Perry.....	*Frank J. George.....	Tell City.
Pike.....	*W. B. Pirkle.....	Augusta.
Porter.....	Homer W. Porter.....	Valparaiso.
Posey.....	*Oscar L. Sewell.....	Mt. Vernon.
Pulaski.....	John H. Reddick.....	Winamac.
Putnam.....	L. E. Smedley.....	Greencastle.
Randolph.....	*J. W. Denny.....	Winchester.
Ripley.....	*Russel T. Olmstead.....	Rexville.
Rush.....	*Wm. S. Meredith.....	Rushville.
Scott.....	Wm. M. Whitson.....	Austin.
Shelby.....	*Lester Clark.....	Shelbyville.
Spencer.....	Joseph W. Nourse.....	Rockport.
Starke.....	W. B. Sinclair.....	Knox.
St. Joseph.....	Calvin Moon.....	South Bend.
Steuben.....	Robt. V. Carlin.....	Angola.
Sullivan.....	James A. Marlow.....	Sullivan.
Switzerland.....	Marion C. Walden.....	Vevay.
Tippecanoe.....	W. H. Caulkins.....	LaFayette.
Tipton.....	*J. E. Fish.....	Tipton.
Union.....	Clarence W. Osborne.....	College Corner, O.
Vanderburgh.....	*John W. Davidson.....	Evansville.
Vermillion.....	*George W. Deland.....	Perrysville.
Vigo.....	Harvey W. Curry.....	Terre Haute.
Wabash.....	John N. Myers.....	Wabash.
Warren.....	*Fremont Goodwin.....	Williamsport.
Warrick.....	R. D. Mellen.....	Boonville.

Washington.....	W. C. Snyder	Salem.
Wayne	*Benj. F. Wissler.....	Cambridge City.
Wells.....	*Wm. A. Luce	Liberty Center.
White.....	John H. Rothrock	Monticello.
Whitley.....	Alexander Knisely	Columbia City.

PERSONAL.

W. S. Wood will remain in charge at Seymour.

E. W. Wright will continue to hold the reins at Kendallville.

R. I. Hamilton will continue in the superintendency at Anderson.

J. C. Gregg will continue to conduct the school interests at Brazil.

J. R. Walton, of Edgerton, O., has been elected Supt. at Ligonier.

R. W. Wood has been re-elected Supt. of the Jeffersonville schools.

E. E. Griffith, Supt. of the Frankfort schools, has gone to Europe for the summer.

E. A. Bryan continues in charge of Vincennes University at an increased salary.

Harriet Beecher Stowe, author of "Uncle Tom's Cabin," was 76 years old June 14th.

J. C. Black, having done a good year's work, has been re-elected Supt. at Logansport.

L. B. Griffin has been re-elected at Waterloo. He will conduct a normal this summer.

J. R. Starkey has been elected for the twelfth time as Supt. of the Martinsville schools.

C. M. Marble, of Rising Sun, has been elected principal of the Jeffersonville high school.

Geo. F. Kenaston has been re-elected at Noblesville, at an increased salary. Served him right.

Capt. H. A. Ford, of Detroit, Mich., has been engaged to work in the Clinton county institute.

Dr. A. R. Benton has just closed a very successful year's work as President of Butler University.

Miss Alice Forsythe, of Indianapolis, will be one of the instructors in the Waterloo Normal School.

R. B. Anderson, a graduate of De Pauw, this year's class, has been elected Supt. of the Spencer schools.

H. W. Bowers, late efficient Supt. of Randolph county, has been elected Supt. of the Portland schools.

Mrs. Anna E. H. Lemon retires from the Spencer schools, having taught in them acceptably for 12 years.

S. S. Parr, Prin. of the De Pauw Normal, has been granted leave of absence and expects to sail for Europe about July 20th.

Geo. A. Osborne, late Supt. of Grant county, will take the principalship of the Normal School building in Marion.

J. K. Walts, who filled out the school year at Marion, has been elected Supt. for the coming year at a salary of \$1400.

R. P. Lamb, a well known teacher of Ripley county, has turned "Job Printer" at Cross Plains. May he be successful.

W. F. Hoffman has been retained for a third year at Washington. W. F. Axtel also remains as principal of the high school.

Dr. D. S. Jordan, President of the State University, will spend a part of his vacation in the Agassiz Museum, at Harvard University.

Prof. W. N. Hailman, of La Porte, is the instructor in Primary Methods at the Round Lake Summer Normal, near Saratoga Springs, New York.

O. T. Dunagan has returned to Indiana for his summer vacation. He will resume work in August, as principal of the Aurora (Illinois) Normal School.

Miss E. P. Goodson, who has been added to the teaching force of the Mitchell Normal School, is a graduate of Michigan University. She is doing good work.

David S. Jordan, President of the State University, recently spoke in Plymouth Church, Indianapolis, on "Thoreau and John Brown." The address was well received.

W. W. Grant, Principal of the Indianapolis high school, has gone to Europe to spend his summer vacation. He seems to like it, as he did the same thing last summer.

J. M. Olcott, formerly of Indiana, is now connected with W. A. Olmstead, of Chicago, in the school supply business. He is general manager for Ohio and Pennsylvania.

B. J. Bogue, Supt. of the La Grange schools, has been elected to a similar position at Mishawaka. At last reports La Grange was making an effort to keep Mr. Bogue from leaving.

J. C. Eagle, who has for the past eight years been Superintendent of the Edinburg schools, has been elected Supt. of the Shelbyville schools, to take the place of W. H. Fertich, resigned.

Prof. D. W. Dennis, of Earlham College, recently gave an address on "The Bible and Nature," which has been printed in neat form, and sells for 10 cents a copy. It is richly worth reading.

C. H. Wood, Supt. of the Winchester schools, closed his first year's work with so much credit that his friends presented him with an easy chair, which the paper says "is a daisy in every respect."

John W. Holcombe, ex-State Superintendent, has been on duty as chief clerk in the Bureau of Education, Washington, D. C., since June 1, and is making excellent progress in getting his work in hand.

Mrs. Emma Mont. McRae has been re-elected Prin. of the Marion high school, and had her salary advanced to \$1000. She has also been offered a position in the Chicago schools, which she is now considering.

W. H. Fertich, for four years past Supt. of the Shelbyville schools, has been elected Supt. of the schools at Larned, Kan. If he accepts Kansas will gain another of Indiana's wide-awake, progressive, and efficient superintendents.

W. W. Wirt has been able to hold his place at Portland for three years, and now retires. For the six years preceding his administration Portland had changed superintendents every year. This is a bad record, that Portland should hasten to amend.

M. L. Hoffman, a graduate of the State University, and for the past two years teacher in the Indianapolis high school, has been elected principal of a first year high school in Minneapolis. By this move Indiana loses a growing man of much promise.

Elias Boltz has resigned the superintendency of the Mishawaka schools. The reports in percent of attendance, tardiness, etc., show the schools well up. In his four years of service he increased the public school library from 73 to over 400 volumes.

Prof. E. E. Smith, formerly of Purdue, has declined a professorship to which he was elected in a college at Wichita, Kan. He has been re-elected to superintend the schools at Corydon, Ky., at an increased salary, but at last reports had not yet decided to accept.

George F. Bass has completed his book entitled, "Quotations and Select Stories for Opening Exercises," and he expects it from the printer in a short time. From the interest taken in the announcements heretofore made this seems to be "just the book I have been looking for." George is happy.

R. G. Boone, Professor of Pedagogy in the State University, on the first Sunday in June filled the pulpit of Plymouth Church, Indianapolis, both morning and evening. His subjects were, "The Growth of Tolerance," and "The Religion of Morality." Both discourses were highly appreciated.

Cyrus W. Hodgin gives up the principalship of the Richmond Normal School to accept the chair of History and Political Economy in Earlham College. He turns the school over in good condition to his successor, J. C. Macpherson, who has for many years been Supt. of Wayne county. Earlham has made a valuable acquisition to its corps of instructors.

W. R. Snyder, principal of the Muncie high school, has been promoted to the superintendency, *vice* John M. Bloss, resigned. Mr. Snyder is a worthy man and will doubtless fill the new position acceptably. The board acted on a correct principle—*i. e.*, the Civil Service principle. When a vacancy occurs in a corps of teachers, it should be filled when possible by promotion from the same corps.

W. H. Caulkins, Supt. of Tippecanoe county, is the oldest superintendent in the state. His predecessor in office, who was the first under the law providing for county superintendents, served only eight months, and Mr. Caulkins was appointed to fill out the unexpired term. Since that time he has held the office continuously, and the most remarkable thing about it is he has never had a competitor, and has till the last election when a single ballot was cast against him, always been unanimously re-elected.

BOOK TABLE.

GINN & Co., *Boston*, are about issuing a *Rhetoric*, by Prof. John F. Genung, of Amherst College, which they claim will be superior to anything of the kind yet published.

SECOND NATURAL HISTORY READER: *By J. G. Wood. Published by the Boston School Supply Company.*

The author of this book is the author of "Homes without Hands," and this of itself is a strong recommendation. The book is beautifully illustrated, and is all that could be desired in a book of this class.

THE CHURCH AT WORK: Is the name of a family religious paper published at Indianapolis, with Revs. E. P. Whallon, R. V. Hunter, and G. L. McNutt as editors. It is published in the special interest of the Presbyterian church, and is one of the most practical, pointed, wide-awake papers of its class that we have seen. It is published weekly at \$1 a year.

SHELDON'S ELEMENTS OF ALGEBRA: *New York and Chicago: Sheldon & Co.*

This is a simple, clean-cut, elementary Algebra, with a full supply of well graded examples, the solution of which will discipline the student in the principles of the subject. It seems to be well graded and admirably adapted to use in high schools, and contains all that is usually taught in those schools. The same house will soon publish a "Complete Algebra," which will be this book *plus* a 2d Part. Persons wishing to secure an algebra fully abreast the times would do well to examine this.

BUSINESS NOTICES.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

HOME STUDY.—Latin and Greek at sight, use the "Interlinear-Classics." Sample page and Catalogue of School Books, free. C. DeSilver & Sons, No. (Y) 1102 Walnut street, Philadelphia, Pa. 2-6t.

All the Pan-Handle and Vandalia lines will sell tickets to the National Educational Association at Chicago at the lowest excursion rates.

WANTED—The Superintendency of a Manual Training School, where iron, steel, and brass turning may be taught; lathe work; running of machines to make machines—by an experienced teacher in schools. For information apply to Machinist, 250 Liberty St., Springfield, Ohio. 6-2t

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ills. 1-tf.

A. S. BARNES & Co. have removed to their new commodious quarters, 263 Wabash Avenue, Chicago, and will welcome their friends who attend the National Association. They extend a cordial invitation to Indiana teachers to make this headquarters. Hubert M. Skinner, formerly of Indiana, will be in the office and take pleasure in showing you the "sights." You will find Cyrus Smith at Room G, Sherman House.

THE "MONON ROUTE" from Indianapolis to Chicago is the most desirable one for teachers to take in going to the National Educational Association, July 12th: *First*, It is the shortest. *Second*, It runs into the Dearborn St. Depot, the finest depot in Chicago and in the West. *Third*, This depot is only *half-a-block* distant from a street car line which will land teachers within 200 feet of their hotel (the Brevort), and thus save their hack hire and all trouble. *Fourth*, The train leaves Indianapolis at 11:50 A. M. and reaches Chicago at 6:50, in time to reach hotel and get settled before dark. *Fifth*, The managers of the road are putting on new cars and will carry you there in first-class style, and at the lowest rates.

For further information address or call on I. D. Baldwin, Passenger Agent, 26 S. Illinois street, Indianapolis.

AN OLD ESTABLISHED RULE CONTINUED.—Of late years, Railroad Excursions on the Fourth of July have become so general, that the public have had cause to look for reduced rates on that day as a matter of course. This year there may be a doubt in the minds of some as to the continuance of this practice, formed from opinions they may have of the effect of Inter-State Commerce Law. If so, we are pleased to dispel them, and quote the announcement for that day made by the Vandalia Line. In substance it is as follows: The rate will be One Fare for the Round Trip between all stations. Tickets will be good going on July 2d, 3d, and 4th, and good to return including July 5th, allowing four days for a visit or an outing. If the latter, the announcement reads, no better place can be found than LAKE MAXINKUCKEE, which is no doubt so, as Boating and Fishing can there be indulged in to your heart's content. It is the Indianian's Home Resort.

CONSUMPTION CURED.—An old physician retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y. 11-9t

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P. O. Box 410 Birmingham, Ala.

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THE TRUE CONCEPTION OF METHOD.

BY HARRIET CASPAR.

THE word Method is used in a number of ways. It may be made to signify means, mode, order, system, regularity, cause, and to express various shades of meaning. As the word is sometimes used it means a characteristic manner; i. e., a way or manner peculiar to some one individual.

In another use, Method means an orderly procedure or process. When a person is spoken of as a methodical business man, it is meant that he is orderly in his procedure, that he is regular in his business hours, and that he does not vary from his accustomed rule of doing things. Again, we say, a certain man is a methodical thinker; i. e., he is clear on every point, he goes forward step by step from one point to another, being convinced and sure of every advance made in his process of thinking; or we may mean, he has a rational way of investigating truth, or a rational way of expounding it.

According to some definitions, Method means advancement or progress. Sir Willam Hamilton says this: "All method is a rational progress—a progress toward an end."

At times, Method means the arrangement or classification of natural objects according to their common characteristics; i. e., the relations of likeness and difference existing between plants and between animals systematized. We speak of the Linnean method, and every one understands that the classification of plants made by Linnæus is referred to.

The word is used in a different sense when some one speaks of the "method of a subject." When used in this connection, method means the organization of the subject, the logical arrangement of topics, the sequence of causes and effects. In brief, the "method of a subject" has reference to the general scheme or plan used in the elaboration of it—the order of subordination of point to point.

In one of his conversations with Hamlet, Polonius, struck by the fitness of his remarks, says: "Though this be madness, yet there is *method* in it." The word here has a peculiar use. It evidently means reason, sense, consistency. Polonius meant there is reason or sense in his madness.

Method as an educational term—the expressions method of teaching, method of education, and method of instruction, are used in almost as great a variety of ways. To some these phrases mean the manner of teaching—the external manner, the form of questioning, governing, and directing. To others, method of instruction means the *system* of instruction adopted; as it is said, this teacher uses the alphabetic method of teaching reading, another uses the word method, while a third uses the phonic method; one teacher uses the Grube method, and so on..

The idea *way* is put into this word by some teachers and educators, and when used in this sense a depth of meaning is expressed greater than when used to mean a way or system. Laurie, in writing on this question of method, says: "Methods of teaching deal with the times and ways of using materials of instruction and discipline, and of presenting them to the minds of the learner; and *right* methods are such times and ways of using and presenting our materials as truly accord with the times and ways of mental growth. Methods of teaching are those processes by which we convey instruction and discipline with a view to the formation of right habits of the intelligence and will." Further in his treatise he says: "A method is a way toward the attainment of an end."

Tate, in his *Philosophy of Education*, gives expression to a deeper insight into the meaning of method, than did Laurie, by advancing this thought: "By a method of education is meant

the peculiar way in which a subject is taught. * * * * A method of teaching comprehends not merely the way in which the subject-matter is treated, but also the means, artifices, forms of expression, etc., that are employed in conveying instruction to a class of children in a common school." Tate means all that Laurie does, but *adds* the means, artifices, and devices employed in *realizing* the way.

But a still more definite meaning is attached to this word by White. He pushes a little nearer the idea of method as a principle or series of principles. He writes: "A method of teaching is a series of teaching acts so arranged as to attain a definite end or result. Method is more than the way or manner of one act or of several acts. It involves a systematic arrangement of a series of acts, an orderly and rational procedure to a given end;" i. e., a method is a series of teaching acts arranged according to and determined by some principle or group of principles which the teacher has in mind.

Among educational writers the expressions, "the method of nature," "the order of nature," and "the natural method," are common. These sayings have become trite and are used with much vagueness and inaccuracy. Perhaps the generality of teachers understand "nature method" to be the way or order in which nature accomplishes her purposes, together with the laws or principles which govern her actions.

Nature proceeds from the simple to the complex; nature does nothing by leaps; nature advances by regular steps; nature presents first the simple, then the complex, etc. This body of nature laws or principles is designated the method of nature, and a teacher is said to follow the natural method when he develops the minds of the children under his charge according to these laws. He regards the children's minds as natural products and becomes a *principled* teacher when he presents the subject-matter of common school education by regular transitions and by related steps; when he presents first the simple then the complex, and leads from the concrete to the abstract.

Some educators hold that there are but two methods of education; viz., the analytic and synthetic. They argue that analysis

and synthesis are the methods used to discover truth, and for this reason should be the methods used to transmit it,—that all progress made in the process of acquiring knowledge must be made by either or both of these ways. Reasoning is either inductive or deductive. Some subjects are to be taught inductively; for example, chemistry or physics. By repeated trial and experiment of individual cases the generalization is made. Whereas, the different phases of mathematics are to be taught largely by the deductive method, the general truth being used to prove the particular.

The analytic and synthetic methods may be called natural methods, if by *natural* is meant those processes which inhere in mind by its own constitution and by which it grasps knowledge. The idea of making these processes of mind—analysis and synthesis—the methods of teaching, puts a deeper significance into the phrase than is commonly given to it. It makes method a subjective, an internal process rather than the external manner of the teacher. But, analysis and synthesis are the acts involved in an act of knowing and are the ways by which the mind grasps any form of knowledge. Objections may be raised against limiting the method of teaching to these ways of knowledge, since no account is taken of the principles which govern mind action, and of those characteristics which determine its development.

Method as here used is not a manner, system, or way; is not the means, devices, or artifices employed in presenting a subject to a class of children; nor is it a series of teaching acts arranged in a systematic order.

True method is that principle of mind or group of principles, together with those truths of the subject taught which *determine* the way, the manner, the means. Method is that inherent characteristic of child-mind which the teacher *consciously* keeps before him, conjointly with the nature of the subject presented, which peremptorily declares to him, you must do this way or you must do that; you must adopt this manner, this way, this device; you must nurture the mind with this food, you must give it in this way, else you do violence to its nature. Method, in its deepest sense, is the basis, the ground-work from which the outer form, the ex-

ternal act grows, and to which the way, the manner, looks for its being. Genuine method is the first principle, the final cause, the rationale of all teaching acts.

An intelligent teacher on being asked why he follows some method, or for what reason he does certain ways, would say—I do this way rather than some other because the mind has at one time, but a given amount of energy; because the mind is self-active, it grows by its own activity, and because of the nature of the lesson I teach. Did he reflect, doubtless he would see that his method *is* the because, the why, the reason, and *not* the out-growth of them.

Method, as here conceived, is the essence, the life of all teaching acts, and not the teaching acts themselves. Those characteristics of the working, active mind of the child and the nature of the subject-matter toward which his energy is directed, are the method—the acts of the teacher, the devices he employs, etc., are but the pre-determined accompaniment.

We say that nature is the embodiment of God's thought; we would not say that nature is God—but nature is merely the expression, the manifestation of His reason. It is just the same with method—the outer action and manner of the teacher being the adjustment of the subject-matter of the lesson to the character of the mind undergoing the process of development and to its present stage of growth.

Form is often mistaken for thought. The forms and ceremonies incidental to religious worship are confounded with true religion; the form, the body, the physical organism is not always distinguished from man the spirit, the individual; the forms of method have not escaped being confused with and interpreted as the truths underlying them.

To exemplify what is meant by the True Conception of the Method—A teacher in the primary grades presents the number eight to her first year pupils. What does she do? First, she gives every member of the class a group of objects, each group made up of eight like parts. To one child she gives a group of cubes, to another circles, to another apples, quadrants, cones, sticks, matches, pencils, or any other group of eight. Second,

by direction, she leads them to discover *for themselves* the facts and relations of the number from the objects before them, pushing each child to the *extreme* of his given thinking, reflecting, and observing powers. Third, by bringing up all suitable examples, the child is led to see that these relations are true of all possible groups of eight, and finally arrives at the general truths or abstract facts of the number.

Why does the teacher give the children the objects?—for the reason that they are yet in the concrete stage of thinking. Why does she give them as many different groups as possible?—so that they may see that these facts are true of any number of individual cases, and so that they will not generalize without sufficient basis. Why does she not wish them to make a hasty generalization?—from the fact that the mind tends to act again as it has acted before. Since the teacher is helping to form the tendencies of future action, it is of *vital* importance that she assist in forming the *right* tendencies. Why does she lead the children to discover the relations for themselves?—because the mind grows only by its own activity and by being pushed to its *maximum* degree of power. Again, why does the teacher give the children the different groups of objects?—because they are yet in the concrete stage of inductive reasoning.

This is what is meant by The True Conception of Method. In this particular instance, the method is the group of mind-principles—the mind grows by exercise, it tends to act again as it has acted before—the fact that the children are in the concrete stage of inductive reasoning, together with the facts and relations of the number eight.

These truths, principles, or ways of the mind so directed toward the lesson constitute the method; the forms of presentation are but the devices, the helps, the means, the extraneous aids, of which the *deeper* conception of method is the spirit, the substance.

SALEM, INDIANA.

SCHOOLS. — Jails and state prisons are the complement of schools; so many less as you have of the latter, so many more you must have of the former.—*Horace Mann*.

ABOUT COMETS.

BY PROF. DANIEL KIRKWOOD.

THE NUMBER VISIBLE TO THE NAKED EYE.

From A. D. 600 to A. D. 1600, that is during the thousand years immediately preceding the invention of the telescope, the number of comets recorded was 284, or two, on an average, in every seven years. In the seventeenth century the number was 31, in the eighteenth, 70, and in the nineteenth, from 1801 to 1885, inclusive, 221, a large majority of which were telescopic. In the twenty-five years from 1861 to 1885, ninety were observed, which nine or ten were visible to the naked eye. Without the help of glasses, therefore, we may expect a comet every three or four years, and with optical aid, about three annually.

THE EXTENT AND DENSITY OF COMETS.

The dimensions of comets vary from the smallest perceptible speck of cloud-like matter to volumes many thousand times greater* than that of the sun himself. In some cases the diameter of a comet seems to vary with its distance from the sun. The comet of Encke, for instance, has sometimes a volume much greater than the earth; at other times less than the planet Mercury. Perhaps equal variety may obtain in the densities of these bodies, but of this our knowledge is for the most part negative. A very thin cloud in the earth's atmosphere not only shuts out the light of the stars, but hides from our vision the sun himself. Instances are not wanting, however, in which comets have passed over telescopic stars without any sensible diminution of their light. For example, the second comet of 1857 (Brorsen's) occulted a star of the eighth or ninth magnitude on the 22d of April, and on the 24th of May it passed almost centrally over another still smaller, without rendering either invisible. It is an interesting fact, moreover, that the light of the stars suffered no refraction in its passage. But while the nebulosities of comets have an almost infinite tenuity, it seems probable that the central parts of some are solid and dense, as they could not otherwise resist

* Including the train.

the separating tendency of the sun's attraction when the comet is in perihelion.

ARE COMETS, LIKE THE PLANETS, PERMANENT MEMBERS OF THE
SOLAR SYSTEM?

Comets moving in open curves—parabolas or hyperbolas—can visit us but once. Of those moving in ellipses, one at least (that of Biela) has been broken up or dissipated in our own time. Its fragments are now seen in the meteors of November 27th. Others, as those of August, 1862, and January, 1866, are in the process of dissolution; the former yielding the meteors of Aug. 10th; the latter, those of November 14th. How many years or centuries may be required to complete the process it is impossible to predict. Other periodic comets are perhaps undergoing a similar separation. To the question asked, therefore, we can only answer, in the present state of our knowledge, that as compared with planets, some comets are known to have a relatively brief existence; others, even now, seem tending to disintegration; while few, if any, can be regarded as permanent.

THE ROOTS.

BY N. NEWBY.

Square and cube roots are usually taught through their application to areas and volumes. This is, indeed, an easy way of presenting the subject in its most elementary aspect. It seems to me that thus to teach this matter is to place the somewhat mature pupil on the same plane of instruction as the child in the earlier grades. Thus to approach, and especially thus to leave the subject, is to ignore the higher reflective culture which the pupil can take, and which the subject itself is so well calculated to give.

In factoring, as the pupil already knows it, neither the number of factors which compose a given product nor their relation of equality is known beforehand. Evolution is but a special case under factoring in which it is expressly and in advance stipulated that the factors of the given product (power) shall be equal, and that there shall be a definite number of them, as two, three, etc.

The logical relation of evolution to factoring is thus exhibited. The factors of a product are found by means of known relations which the product sustains to those factors, and these relations are seen in the light of the principles of multiplication and division. In connection with these processes it is my practice to teach the meaning of the terms—power, root, second power or square, third power or cube, etc. The pupil is also required to form and memorize a table of squares from 1^2 to 25^2 . Also a table of cubes from 1^3 to 9^3 . A table of products is also formed, as: units squared equal units (i. e., units' place is the lowest in the written square of units in which a digit stands.) Tens squared equal hundreds. Hundreds squared equal ten-thousands, etc. Tens multiplied by units, or units by tens equal tens. Hundreds multiplied by tens, or tens by hundreds equal thousands, etc.

Next take any number consisting of tens and units and square it, observing how each partial product is formed, e. g. :

$$27$$

$$27$$

$$49 = \text{the square of the units.}$$

$$140 = \text{the product of the tens and the units.}$$

$$140 = \text{the product of the tens and the units.}$$

$$400 = \text{the square of the tens.}$$

$$729 = \text{the square of } 27,$$

and is formed by the square of the tens plus twice the product of the tens and the units (or twice the tens multiplied by the units), plus the square of the units.

The involution part of the "root" question is usually hurried over too rapidly. The pupil should "involve" a large number of numbers in the same way as the above until he *clearly* sees the elements which enter into the square.

The extraction of the square root consists in re-tracing the steps taken in the involution, which logically precedes the evolution. Suppose it be required to find the square root of 729. The pupil must think his way through the solution somewhat as follows:—

$$\begin{array}{r}
 \text{t. u.} \\
 \bullet \quad 729 \text{ (27)} \\
 \quad \underline{4} \\
 4 \text{ t. } \overline{)329} \\
 \quad \underline{28} \\
 \quad \quad 49 \\
 \quad \quad \underline{49} \\
 \quad \quad \quad 0
 \end{array}$$

Since there are three orders [h, t, and u,] in the square, there are two orders in the square root, viz: tens and units. The square of a number consisting of t . and u . is made up of the $t.^2 + 2 \times t. \times u. + u^2$.

Since $t.^2 = h$, the h . of the power contain the square of the t . of the root. The greatest square number of h . in $7 h$. is $4 h$, the greatest root of which is $2 t$. Hence 2 is the *tens* of the required root.

The power less 400 equals 329 , which contains the product of twice the *tens* of the root, or 4 *tens* as one factor, and the *units* of the root as the other. Now this product must be some number of tens, since its factors are *tens* and *units*. The 32 tens of the remainder must, therefore, contain this product. Upon dividing $32 t$. by $4 t$. a quotient of 7 is obtained; this is probably the units of the required root. $4 t. \times 7 u = 28 t$, which, taken from the remaining part of the power leave 49 . This remainder must contain the square of the units of the root. $7^2 = 49$. $49 - 49 = 0$. 27 is thus found to be the square root of 729 .

The work is not done when the pupil is able to follow the teacher through the solution and assent, even understandingly, to the steps taken. The pupil, himself, must be required to *work* and to *talk* his way through a large number of exercises similar to the one given herewith.

In order to evolve a three term root, the pupil must first construct the square of such a root and so arrange the partial products that he can generalize the elements which make up the power. A little assistance and a great deal of exercise will enable him to retrace the involution steps through such a power, and thus effect the evolution of its second root.

I treat the cube root in a similar manner, and the results obtained have been such as to justify the means.

TERRE HAUTE, IND.

It is one proof of a good education and true refinement of feeling, to respect antiquity.--Mrs. Sigourney.

*THE PERFECT LIFE—A PARABLE FOR BOYS
AND GIRLS.*

BY W. H. VENABLE, LL. D.

AT the edge of a meadow a spring welled through a bed of golden sand. The water ran a tiny rill, first hidden by the grass which it nourished, but soon emerging from the verdant cradle of its infancy, it appeared like a tremulous silver cord half sunk in the yielding soil; then, increasing as it moved, it washed out shining pebbles to gem its deeper channel. Transparent animalcules lived beneath its surface on which a thousand insects played; small birds splashed their wings in its liquid coolness, and sang as they rose into the sunshine.

As the streamlet rippled along, its murmur soothed the ear and its beauty charmed the eye; it became the habitation of the finny race, and the waterfowl led their graceful convoys across its grassy pools. Flocks and herds slaked their thirst at its margin. The lusty swimmer sported in its embraces; pleasure boats danced on its waves; poet and artist gazed with delight at its swift cascades bright with rainbow hues and musical with the sound of many waters.

And still the stream flowed on. It irrigated field and forest, sending the flood of vegetable life through a billion rootlets to a billion leaves. It tempered summer's heat and winter's cold, sending up vapor to the hungry air, loading the clouds with rain and fulfilling the economies of nature.

The stream rolled on. It bore on its bosom the argosies of commerce; its shores were sought by teeming cities; it bounded states and separated nations; vast kindred rivers were its affluents. The image of majestic power, the type of life, the emblem of God's eternity—at least it joined the ocean, its course complete, its destiny accomplished.

When did the stream begin its usefulness? Tell me, oh eager youth, and I will tell thee when man may first render service to the world in which he lives. Life's duties—the years of accountability—when do they come? When come they not? Can't mark the point where the rill becomes a rivulet? the rivulet a brook? the brook a river?

Man counts his journeys round the sun, and names them years; he is a babe, a child, a youth, a man; but each day is as other days, and the child is still father to the man. We are perpetually changing, learning, maturing, but there are no abrupt transitions. A soul is the same individual from birth to death; yes, and after death.

There is delusion in the promise that Time whispers to the boy; there is deception in the beckon and smile of coming birth-days. To-day is like yesterday and to-morrow is like to-day. The ardent youth in his teens longs to become of age. "Oh! that I were twenty-one!" Alluring twenty-one!—tantalizing, ironic flatterer! What lad has not cherished the hope that some great change will come over his life at the dawning of the day of his legal maturity? Who has not vaguely expected that his twenty-first year would confer upon him unbounded expansion of rights, and liberty, and wisdom, and power, and happiness? Twenty-one will free us from the thousand ills that minority is heir to; Twenty-one will fit us for the affairs of life; Twenty-one will give us responsibility, self control, self-reliance, the right to vote, to spend our own, to speak our mind, to win our way.

Baseless expectation! Castles built on clouds! The world whirls on round the sun. The annual voyages are repeated. We wake on the morning of our birth-day. This is the day. Bread tastes as it did the day before; our desires, thoughts, capacity have not undergone any alteration; the outer universe is the same; our inner self is the same.

The progress of the individual life is gradual; its benefits and opportunities are cumulative. As the stream begins small and feeble, yet serving useful purposes, so may the child begin its good career when it begins to realize its own existence. The rivulet does well always, for it always does its utmost. It does its best when it feeds the water-cress, or refreshes the thirsty humming-bird; it does no better when it turns a mill-wheel or bears a navy on its expanded bosom.

The years of accountability are made up of the hours of accountability, and these are here and now. Wait not for Time to come. Time has come; he is with us. Dream not that Time

will give anything. Rather give thy gifts to Time. Time is the custodian of thy deeds.

“It is not growing like a tree
In bulk, doth make man better be;
Or standing long, an oak three hundred year,
To fall, a log at last, dry, old and sere.
A lily of a day
Is fairer far in May;
Although it fall and die that night
It was the plant and flower of light.
In small proportions we just beauty see,
And, in short measure, life may perfect be.”

YALE UNIVERSITY.

A SUGGESTION WORTH CONSIDERING.

NEW HAVEN, June 28 (*Special*).—Alumni Hall was crowded this morning for the 187th annual meeting of the Yale Alumni. William M. Evarts presided, and after a brief speech introduced Edwards Pierrepont, who made an address in behalf of the class of 1837, in the course of which he said:—

“The warning horologue of time strikes the half-century for the class of 1837. We now stand where old Yale and all its cherished memories are fast receding into night, and we soon shall see the widening dawn of the eternal day. This great university has so long been accustomed to hear only praise from its graduates, that a few words of friendly suggestion may usefully break the monotony of admiration. I open the catalogue of this year and read, from page No. 27, eighteen closely printed sections, with a statement that all candidates for admission to the Freshman class are examined in all those books and subjects. The boy of thirteen who begins his preparation must have a stout heart, or be appalled at the task before him; but there is an encouraging note at the bottom stating that next year more will be required. I venture to say that not a member of the class of 1837 could pass an examination for the Freshman class of to-day, and that there never was a time when he could have passed such an examination. If there is any member of the class present who

thinks I underrate his accomplishments, he will, of course, correct me.

The requirements for graduation are in harmony with the requirements for admission. Would it not be well to have many of these exactions for a degree postponed for the resident graduate? This is a university. Encourage resident graduates and all who wish to become teachers, professors or eminent scholars to remain here. But nine-tenths of Yale's graduates propose a widely different career in life, and for them, I fear, you are going to make the entrance and the honorable exit too difficult and thus prevent them from commencing the real work of life until too late. Education at a large university is of priceless value. If the noble men who so generously endow various colleges about the country would bestow the same amount to increase facilities in universities already established they would largely enhance the value of their gifts. A university requires age. It must grow up. If the rich merchants of London should contribute ever so liberally to make another Westminster Abbey, they could not do it. In a large university one professor can teach 200 students as easily as 20. Not only contact of mind with mind, but contact with many minds, is absolutely essential to a perfect growth.

Academical plodding should cease for those who are to be men of affairs at the age of twenty, and those studies and observations of the world should begin which are suited to the career proposed. The young man who has not set his ambitious foot upon "the ladder leaning on a cloud" before twenty-five, will never ascend it. It should not be difficult for the student of fair ability to obtain his degree, without injury to his elasticity of mind or bodily health, by the time he is twenty; but if you impose burdens too heavy for this, the years draw nigh in which the numbers of illustrious names on your roll of graduates will be few."

USE THE RIGHT WORD.

* MISS LOUISA M. HODKINS sends the *Christian Union* the following list of "words, phrases and expressions to be avoided."

Most of these errors are current in Indiana as well as in New England, and teachers would do well to note them carefully.

Guess, for suppose or think.

Fix, for arrange or prepare.

Ride and *drive*, interchangeably (Americanism).

Real, as an adverb, in expressions real good, for really or very good, etc.

Some, or *any*, in an adverbial sense; *e. g.*, "I have studied some," for somewhat. "I have not studied any," for at all.

Some ten days, for about ten days.

Not *as* I know, for not that I know.

Storms, for it rains or snows moderately.

Try an experiment, for make an experiment.

Singular subject with contracted plural verb, *e. g.*, "She *don't* skate well."

Plural pronouns with singular antecedents, "Every *man* or *woman* should do *their* duty;" or, "If you look *anyone* straight in the face they will flinch."

Expect, for suspect.

First-rate, as an adverb.

Nice, indiscriminately. (*Real nice* may be doubly faulty.)

Had rather, for would rather. *Had* better, for would better.

Right away, for immediately.

Party, for person.

Promise, for assure.

Posted, for informed.

Post-graduate, for graduate.

Depot, for station.

Stopping, for staying.

Try *and* do, for try to do. Try *and* go, for try to go.

Cunning, for smart, dainty.

Cute, for acute.

Funny, for odd or unusual.

Above, for foregoing, more than, or beyond.

Does it look *good* enough, for well enough.

Like I do, for as I do.

Not *as good as*, for not so good as.

Feel *badly*, for feel bad.

Feel *good*, for feel well.

Between seven, for among seven.

Seldom *or* ever, for seldom if ever, or seldom or never.

Taste and smell *of*, when used transiively.

More than you think *for*, for more than you think.

These kind, for this kind.

Nicely, in response to an inquiry for health.

Healthy, for wholesome.

Just *as soon*, for just as lief.

Kind of, to indicate a moderate degree.

The matter *of*, for the matter with.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

AS A SUBSTITUTE FOR BRAINS,

THE note-book is a failure. There are quintals and quarters of wisdom, unnumbered and unsung, quietly stored away in teachers' note-books, where they will repose never to be disturbed by any Gabriel of memory. What teacher has not floundered between the sheol of black-board scratching and the deep sea of note-book writing. Many are the good recitations that go off with a fizz and a sickly little smudge of smoke because the teacher is so busily engaged scratching the back of the black-board and the pupils so busily employed scratching the insides of their note books that they have no time to think. The black-board wastes the chalk and the note-books waste time and thinking, and are either memorized in a sickly way or laid on the shelf to be speedily forgotten. Generally the latter!

Therefore, the note-book as a substitute for brains is a dreary failure. Yet it was not created in vain. Nothing is. As a garner for results it is good; so is it as a means of reaching some kinds of results. The note-book is many-sided, but is not omniscient nor omnipotent. It often happens that the pupil is scratching away at a piece of sized and calendered rag when he ought

to be scratching his knowledge box to encourage lively thinking. The average teacher has the note-book business under his thumb, but not so the poor institute-instructor. The longest and most flexible kind of jaw is required to keep the members of an institute from scratching away for dear life, in season and out of season. They are not, however, to blame for this habit of note book scratching. They were taught it by the institute-instructors.

Perhaps great good comes out of causing pupils to make a good note-book. But they should *make* it for themselves, and not have it given to them already back-seamed and ready for the attic shelf. As there is a right way, so there is a right time for doing such work, and it is pretty clear that the time of recitation is not appropriate to it. We have very generally agreed that the recitation is the place, time, and occasion for running the thinking machines of the whole class on parallel tracks, at the highest speed safely attainable.

*SHALL THE SHOEMAKER KNOW ONLY HIS
LAST?*

Does the primary teacher need Higher Arithmetic? Are Greek and Latin a necessity to English? Does United States History need the perspective of General History? These simple and seemingly trite interrogatories involve two principles quite antagonistic and yet quite necessary each to the other. We mean the narrowness of a specialty, and the converse narrowness of merely general culture. Both are narrow, both wide. The specialist is narrow in concentrating his attention on one little field to the exclusion of all others. He wants the earth for his specialty and thinks everybody else a mere spoke in his wheel. He is wide in that he knows something thoroughly and is an authority in a certain field of knowledge and practice. The person of general attainments is broad in that he knows a little about a great many things. He takes wide views of knowledge and action. His perspective is always a diverging one. But his width is also his source of narrowness. Knowledge, spread out over

a great many things, becomes thin and thinner in an accelerated ratio. Such a person is in danger of not knowing anything thoroughly.

The primary teacher is by her limitations a specialist. Not only is this true, but primary teaching, when done by a common school teacher, is special work. As such it requires special skill and knowledge. But the primary teacher who knows nothing beyond the first-reader, the four rules of arithmetic, and the color chart, is much smaller than she would be, if she knew Algebra, Geometry, Trigonometry, Literature and Science. Other things being equal, such a teacher is vastly to be preferred to one who merely knows the routine primary work.

The primary teacher's case is part of the larger question: What must the teacher know beyond what she teaches? We say, ordinarily, that the first duty of the teacher is to know her work. This is true, but what shall be the implication? Either it means that the little primary work is the sum total of what she should know, or we mean she should know not only it, but the setting or perspective in which it is found, and of which it is part. The latter is the only true interpretation. The teaching knowledge of a subject can not rest in that subject alone. To know ordinary arithmetic well, one must know higher arithmetic; to know primary arithmetic, one must know advanced arithmetic; and to know higher arithmetic, one must be acquainted with algebra; and so of every subject. Therefore, to return to the point of departure it is plain that the shoemaker must know something more than his last.

LIFE IS TOO SHORT!

In a recent list of State Board questions occurred this: "What states compose the German Empire? Bound it. Name its ruler. What national event has just occurred in that empire?"

Mark the answer supposed to be given by many persons: "The German Empire is composed of twenty-six States, viz: Prussia, Bavaria, Wurtemberg, Baden, Hesse, Mecklenburg-Schwerin, Mecklenburg-Strelitz, Oldenburg, Saxe-Weimer,

Saxe-Weinigen, Saxe-Altenburg, Saxe-Coburg-Gotha, Brunswick, Auhalt, Reuss-Greiz, Reuss-Schleiz, Schwartzburg, Rudolstadt, Schwartzburg-Sondershausen, Schaumburg-Sippe, Lippe-Detmold, Waldeck, Bremen, Hamburg, Lubeck, Alsace-Lorraine. It is bounded on the north by the North Sea, Denmark, and the Baltic; on the east by Russia; on the south by the Austro-Hungarian Monarchy and Switzerland; on the west by France, Belgium, and Holland. The ruler is Kaiser Wilhelm I, whose ninetieth birthday was recently celebrated."

Let us all take a good long breath after that unexampled performance, and thank our lucky stars that the ink-bottle held out! The question is all right. It was probably intended to occupy two lines of Long-Primer instead of eclipsing the moral law. It is conceded that one might put such a question under a milligraph or some multiplying machine and worm all these distracting German names out of it. But *cui bono*? Would not the State Board and our good friends the county superintendents, all of whom are reputed to be reasonable beings, be satisfied with an answer giving three or four of the chief states among the confusing hugger-mugger that seek protection under the German double eagle? It hardly admits of a doubt that they would.

If one were given to the vulgar habit of betting, he would be safe in wagering the epidermis of a summer *procyon lotor* that the American who made the list of German pocket-states, did so with a prompter, proof-reader, and plenty of atlases at his elbow. The game is not worth the pains. Why should anybody outside of a charade party bother his brains with all these unspellable Teutonic names? English is full enough of hyphenated monstrosities, without importing "assisted" paupers from the Fath-erland.

- The impression is, perhaps, abroad that this is geography. Why anybody should conceive that a collection of names of dukedoms, principalities, electorates, and the like, many of which are so small that the inhabitants go outside to turn around, and which contribute little to American life, except unpronounceable names and unamericanized immigrants, constitutes geogra-

phy, is not clear. The idea is all the more startling when one considers the everflowing richness of the legitimate subject of geography. No other subject, not even the infinite subject of history, offers a tithe of the good, live matter offered by geography, inside of such guide-book, railway-tourist, ticket-agent matter as this roster of "states," provinces and cities. It can not be that the State Board or any county superintendent intended any such answer. A guide-book must have for the nonce got mixed in where it did not belong. S. S. P.

YES! NO!

THERE is a growing impression that the two little adverbs at the head of this paragraph play entirely too large a part in our recitations. If, when a pupil answers "yes," he were counter-checked by the further inquiry, "'Yes?'—what do you mean by your 'yes!'" the result would be very startling to both the teacher and his pupil. Both would be as much surprised as the small boy who went after wood but fell to playing with some of his neighbors and was putting his ear to the track of a railroad to hear the train, with the enthusiastic declaration, "Boys, I can hear her a mile awa—oh, my goodness!" Just then his indignant mother came whack! on his unprotected person with her broom. Let us take an example:—

TEACHER. "Do you see that the earth's orbit is a line traced by the center of the earth, in a plane passing through the centers of the earth and the sun, in the revolution of the one about the other?"

PUPIL. "Yes!"

TEACHER. "Do you see that this plane which passes through the centers of the earth and sun is the plane of the earth's orbit?"

PUPIL. "Yes!"

TEACHER. "Is it plain to you that the declination of the earth's axis from a perpendicular to the plane of its orbit is always $23\frac{1}{2}$ degrees, and that its various positions are parallel to each other?"

PUPIL. "Yes; it is very plain!"

We can not be sure, so long as the pupil's answers are restricted to this monosyllabic style of rejoinder, that he is anything more than a mere echo. The teacher does the thinking and the pupil does the monosyllabic stupidity. But there is just as much evidence, and no more, that there is culture in Kamtchatka, as that the pupil is thinking the teacher's thoughts, because he is answering "Yes!"

Just now we all have a fit of generosity and are helping our pupils with a lavish hand. Work is chopped into fine bits and fed through a quill, in a way fairly calculated to take away all benefit to the pupil from the use of his jaws in masticating his own food. This is a reaction against a time a decade or two ago when the pupil memorized the entire lesson and then rose in his place and reeled it off consecutively from A to Z. Action and reaction are equal and the comminution of subjects into homeopathic parvules is no better than bolting them *en masse*. The pupil does not know a subject sufficiently well until he can give a consecutive recitation on it, as a whole, employing his own language and his own thought. To such an end the little amenities of "yes" and "no" are inadequate. The pupil must wrestle with his lesson, perhaps often falling, and sometimes failing, but always rising with new strength and vigor.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

SUGGESTIONS ON NUMBER.

THE AMOUNT OF WORK. 1. The work of the first year should not include more than the first ten numbers and their facts and relations; that of the second year numbers to twenty, and of the third year to one hundred. This as a scope of the work will be rejected by no intelligent teacher as including too little until what is included under "a number and its facts and relations" is carefully considered.

2. THE PROMINENT THING. In the first three years the idea of the numbers is to be the most important thing, and the processes are to be subordinate. If the ideas of the numbers and their facts and relations are clearly fixed the processes make themselves evident almost without effort.

3. WHAT NOT TO EXCLUDE. Under the relations of a number are included the fractional ideas involved in it and its application to the tables, such as Liquid Measure, Table of Long Measure, etc. These relations, if presented correctly, are as easily comprehended as the ideas of the number as a whole, and they are necessary to a clear understanding of the number. Moreover, to teach, when dealing with any number, its relations in fractions and in the tables, adds interest to the work, trains the mind to see the similar in the diverse, and gives the mind a more permanent hold upon the work. Therefore, work with fractions and with the tables should move forward, from the first, with the work with whole numbers. The work would be of somewhat the following nature: If *two* is the number it would be considered in all its relations—as made up of one and one; as being two ones; as being one more than one, etc. The idea of *one-half* would be presented, and then *two* would be considered in relation to one-half, as one-half and one-half and one-half and one-half are two, etc. *One* would be studied in relation to *one-half*, as two one-halves are one; one less one-half is one-half, etc. Any thoughtful teacher can work out and make systematic a large number of relations that arise in connection with one and two when the idea of *one-half* is taught. It is a fallacy to hold that work of this kind is difficult and confusing. If *one-half* is taught in conjunction with the whole number *two* the work is strengthened and simplified, for they are mutually helpful and explanatory. The idea of *two* is seen in every relation of *one-half* and the idea of *one-half* is seen in the relations of *two*. *Two* would also be considered, according to the same principle, and with like beneficial results in the tables,—as it would be shown that two pints are a quart; two one cents are the two cent; two quarts are a half gallon; two pecks are a half bushel; two leaves are a folio, etc. In addition the idea of two would be shown in

such words as *couple, span, yoke, brace*, etc. All these ideas and relations of two would be dealt with under all the possible variations afforded by the relations of addition and multiplication, subtraction and division (in its two forms.) Under these conditions the laws of association would most freely and efficiently act. At the conclusion of the work the child would know the number two and something of its power and application. And in addition to this his young mind in an unconscious and interesting way would have been acquiring habits that would tend to system and thoroughness. Do not then begin at the first, to take for a while, whole numbers, and then fractions, and then tables, etc. Take them during the first three years side by side. Afterwards they may be taken in the other way.

4. WHAT TO EXCLUDE. *a.* Exclude from the first year's work all consideration of figures. A consideration of what is above suggested as work with the number *two* and of the full and wide range of relations that are involved in the *actual numbers* from *one to ten* (figures are the words or symbols of numbers) will make it evident that these numbers with their relations furnish ample work for the first year without having recourse to their symbols. It is only the incompetent teacher who thinks that if figures are not taught during the first year the pupils will not have enough to do; or who thinks that they can not be kept busy at their seats at the number hour unless they have learned the figures. It does not justify the teaching of figures during the first year to say that the children can learn them easily. The remark of Wentworth & Reed's Primary Arithmetic upon this point is pertinent—"There is no difficulty in learning the figures along with the numbers; *the difficulty comes in learning the numbers along with the figures.* So it seems best to ignore the sign in favor of the thing."

b. Exclude the teaching of figures higher than the actual numbers taught, when the period for teaching the figures (the second year) does arrive. That is, if at the end of the second year actual numbers have been taught to twenty the figures should be taught only to 20. Romans should be taught at that time only to XX, and the child should be able to count only to

twenty, in so far as his ability to count is the direct result of school work. To teach the pupils to count, or to make them familiar with Arabic and Roman symbols beyond their ideas of actual numbers is to encourage the learning of such things as words without ideas and rules without meaning. It is a severe criticism upon any course of study and indicates superficiality all through it to read in the syllabus of the first year's work something of the following nature:—

Number.—"Teach numbers objectively to ten; Arabic figures to 100; Romans to L; count to one hundred."

G E O G R A P H Y.

(THIRD YEAR OF SCHOOL.)

THE main thing to be accomplished during this year in the geography work assumes in the actual teaching three phases:

1. As a chief thought the instruction that will result in giving the pupils a general conception of the earth as a whole without leading them into a study of, or the use of the map.

2. The result of such work would necessarily be to guard the pupil against the too common error of making the map, definitions, or the text, all-important. Testing even advanced classes makes it evident that the geographical images usually formed by the mind are images of certain portions of a map instead of the real divisions of the earth. In once testing an advanced class upon this point, I asked them to state or show upon paper the idea that first arose in the mind at sight of the word I was about to write. I then wrote upon the board the word Holland, and they prepared and handed in their answers. They were somewhat as follows:—

"I thought of a page at a certain place in my geography, and on it I saw a certain portion of it colored yellow of this shape." (Drawing the shape.)

"I saw on the wall-map in our recitation-room a small part of the surface colored brown, of about this form." (Drawing the outline.)

The others were similar. In each case the image of a colored

piece of paper came first into the mind. To many but little else comes in such tests. The image that should come at sight of the word is a low level stretch of country, ocean-washed, intersected by dikes, dams, and canals, dotted with numerous dairy farms, and populous cities. To give great prominence to the study of the map at the very beginning of the geography work will not tend, however, to the formation of such conceptions. To obtain accurate and vivid conceptions of the real region requires (previous to the study of the map) the study of the region through graphic language and pictures, followed by definite and systematic comparison with that gained by actual observation in the pupil's own region. If the work in geography during the first three years is founded upon accurate actual observation supplemented by pictures, bird's-eye views, and graphic language, consisting of stories of travel, and readings from such books as *The Seven Little Sisters*, *Each and All*, the map will then assume its proper place. For these reasons it is said that the chief design of the work in the third year is to give a general conception of the earth as a whole *without employing the map*.

The second error that was spoken of as too common, i. e., that of making the definitions and general text all-important, is too well understood to require explanation. If the text says that "Switzerland is very broken and picturesque," and in recitation the teacher asks, "What is said of Switzerland?" the pupil is regarded too often by both the teacher and by himself as having a clear knowledge upon that point if he can reply, "Switzerland is very broken and picturesque," although if required to explain and illustrate the exact meaning of what had been so promptly given in answer, his real knowledge of the point might not appear so clear.

To set aside the study of the map during the first three years, and to rely upon a careful observation of the home region, and upon pictures, stories, and vivid descriptions of other regions, and to systematically follow this by a close comparison and contrast of these regions with the home region, would to a considerable extent prevent the pupil from ever thinking that when he had learned the words of his geography book, he has mastered

his geography lesson; and it would also tend to accomplish another aim of the third year geography—namely, to open up to the child, early in the work, the wonderful and picturesque features of the subject, and thus furnish him with a powerful incentive to future study.

A formal statement of the aim of the geography work of the third year would then appear somewhat as follows:—

1. As the main design—To give a general (though fragmentary and incomplete) conception of the earth as a whole by means other than the map.

2. Incidentally, as resulting from the foregoing:—

a. The opening up to the child of the “Fairy-land” of geography.

b. The guarding against use and memorizing of map, definitions and text, before ideas of the real thing are obtained.

c. The giving of extended ideas of distance, direction, means of communication, vegetation, animals; of different peoples and how they live, what they eat and wear, the kinds of houses they build, the animals they use, and in general, a clear comprehension of all those ideas touched upon in the work of the previous years.

DEVICES IN COLOR.

In considering the exercises in “Education by Doing” (E. L. Kellogg & Co.) I noticed the two following devices for teaching *color* and *form*:—

1. “Packages of diamond dyes, in primary and secondary colors, may be bought at the grocer’s or druggist’s for ten cents a package. With very little trouble thousands of shoe pegs may be dyed beautiful bright colors. These will delight the children, and may be utilized in color lessons alone, or in combining color with number, form, and designs. They may be used upon the desks or slates. The teacher may dictate the arrangement, as so many of each color placed together, certain forms in certain colors, or the children may arrange them to suit their own fancies; being able to state, when finished, what they have done.”

2. "Make small white muslin flags, and paste narrow strips of colored paper in all the different surface forms on them. The solid forms must be cut out of the sheets of colored paper; two or more colors may be used to represent one solid."

These flags serve nicely in review exercises in form and color. Each scholar may stand in turn and state the form and color on his flag; as, "My flag has a blue square," or "My flag has a cube; the sides are blue and the top is red. The children may also state whether their color is primary or secondary, or tertiary, and describe the form: as, "I have a green triangle; green is a secondary color; it is made of blue and yellow;—a triangle has three sides and three angles." To vary the exercises, the teacher may ask for all those who have blue on their flags to stand, and call for the other colors in the same way; also those who have certain forms, or all who have angles, or any particular kind of angles or faces."

REPETITION.

THE necessity for repetition in all school work is almost self-evident. It is especially essential, however, in primary work, because so large a part of the knowledge is new to the pupils, and also because their habits of acquisition are not yet sufficient to fix knowledge with so few repetitions as will suffice later.

That part of the recitation in which the greater part of the repetition should occur is the concluding part; but at all stages of the recitation it should be carefully and thoroughly employed. There should be repetition by the pupil reciting, by other pupils individually, and by the class as a whole. The repetition by the class as a whole should not be resorted to until there has been careful individual drill.

As is well understood there are two ways of repeating. One is to repeat the thought in the exact form in which it has been given; the other, is to give the thought, but from another standpoint, or in other language. For example, if the recitation that has been made is "Green is a secondary color," the first mode of repetition is for another pupil to give "Green is a secondary color"; and then another, and then another, etc., and then the class.

The second mode of repetition is to have the thought stated from another standpoint, in other language; as, "Blue and yellow when put together give the color green"; "Green is a color that is formed by uniting other colors", etc.

The mode that is mentioned here as the second is the more thoughtful, the more educative, and should precede the other mode. To employ repetition in the mode first illustrated, almost exclusively, is to fasten upon the child mechanical habits of study and thought. There is to be much drill, but it must be much *intelligent* drill. That is, the second mode of repetition as referred to above must be predominant.

OPENING EXERCISES.

(FIRST AND SECOND YEAR GRADES.)

THE opening exercises in a primary school should be short, suited to the child's comprehension, varied from day to day, and sufficiently interesting to hold the complete attention.

The great object in view will be defeated if the child is made to feel that he is receiving moral instruction; it is not necessary that each selection read or story told, should be "pointed with a moral." Let the story be told in simple, forcible language; let the selection be from an honest, consistent author, who understands the child's nature and needs, and the moral will impress itself without aid.

Those exercises should be employed which have in view both instruction and moral training.

Collect a series of facts and anecdotes from the lives of good people, each of which shall teach some important lesson, such as patience, truthfulness, bravery, kindness to people and animals, self-denial, heroism, patriotism, generosity, etc. If possible, obtain a reliable picture of the person who forms the subject of the lesson. Let the children handle it, if it be small; if large, hang it upon the wall where it can be easily seen. (Harpers' Weekly will occasionally furnish a portrait. Holiday catalogues of books will do the same.)

While the portrait and name are becoming familiar, relate the

anecdotes or facts selected. If an author forms the subject of the sketch, read from his writings. Thus the children will associate the face, the character and the product of his pen.

Such characters may be selected as George Washington, Putnam, Benjamin Franklin, J. G. Whittier, H. W. Longfellow, Abraham Lincoln, Hans Anderson, Louisa Alcott, Mary Mapes Dodge, Lucy Larcom, etc.

At the proper time there may be associated with their author, the "Scrap Bag" stories, chapters from "Little Men" and "Little Women," "Merry Rhymes and Jingles" with Mary Mapes Dodge, "Fairy Tales" with Hans Anderson, etc. Whittier and Lucy Larcom have each a collection of poems for children.

A series of articles entitled, "Stories about Favorite Authors" in "Our Little Men and Women" will be found useful. "Babyland," "St. Nicholas," "Wide-Awake," and the "Independent" will furnish good material, as will "Our Children's Songs," a book of carefully selected poems.

From the study of the characters suggested, the attention may be turned to the life of Christ as presented in the New Testament. The study may begin with his childhood, and the interest be heightened by a description of the manners and customs of the time as differing from our own. Having studied Him, his word and teachings will gain additional interest. The Lord's Prayer should be explained, and committed by the pupil's. Many of the parables can be understood and their truth impressed.

A series of texts (arranged in alphabetical order to assist the memory) may be taught the pupils, each text being the subject of a lesson or a series of lessons. The meaning of the text should be thoroughly understood by the pupils before it is formulated; otherwise, as is often true, the words alone remain in the memory, and are like an empty shell, the rich kernel being overlooked. Through these texts may be taught:—

Love to God, to parents, to all things created.

That we must obey Him, if we wish Him to love us.

That He wishes us to love Him.

That we must be honest in thought, word and deed.

FANNIE S. BURT.

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

SHORT NOTES.

STUDY AND TEST.

If the study of a lesson is a dry, cold way of getting so many dead facts, or so many inches of text, and the recitation following is a mere test to see whether it has been studied, the main end of the lesson is defeated.

READ MORE AND TALK LESS.

Have your pupils read more and talk less. Yes, it has become fashionable to have them talk. We used to do nothing but read, but now some of us talk too much. I wonder if I am one?

CALLING WORDS FROM BLACK-BOARD.

No one can learn to read a book by calling words from a black-board. The way to learn to read a book is to try to read *it*. Combine the two.

WRITING.

Much of the fine writing done in our schools is *not* writing; it is *drawing*, and not "free-hand" either. We should write more than we do. In some schools, it takes twenty minutes to write four ordinary lines.

STRAIGHT LINE GEOGRAPHY.

What states would you cross in going in a straight line from Buffalo to New Orleans? Who ever goes that way? No one, not even a "tramp." Why not ask the question without the "*straight line*" limitation. We then will learn whether the pupil has a good general idea of the country, and whether he knows how to get from one place to another.

WORDS.

"What does the word *Arabia* suggest? "A desert, the camel, the Arab and his horse," said one boy, while another said, "nothing." Then we tried "*India*." Rice fields, jungles, fierce animals, mountain passes and elephant trains, were the result.

DIAGRAMS.

We can no more *teach* grammar by diagraming than we can satisfy hunger by looking at the remains of a Thanksgiving turkey. The running-gears of this turkey may suggest that, in all probability, some one has had a good square meal. The diagram may *suggest* that *possibly* some one *has* made a thoughtful analysis of a sentence; but the diagram *teaches* no grammar. It takes more time to teach the diagram than it does to teach the grammar.

COUNTING.

Because a child can *say* the words *one, two, three*, etc., to *one hundred*, it does not follow that he can count a hundred objects. It is the business of the teacher to see that these words mean something. Have the pupil count *things*—grains of corn, beans, pebbles, pens, pins, desks, sticks of wood, crayon, windows, window-glass, etc. Things that he can handle are best.

It may surprise some *young* teacher to find that the six-year-old can not go to the box and get just ten grains of corn. It is not enough for him to count and touch objects in order thus: *one, two, three*, etc. (touching the object at each word.) He makes the mistake of thinking that the third object is *three*. To prevent this, the teacher must have him put three blocks on the table, bring four pebbles to him, give five beans to Johnnie, etc. Did you ever try it?

PSYCHOLOGY.

The Reading Circle Board has adopted Sully's "Teacher's Hand-Book of Psychology" for the work in this subject for the coming year. Doubtless, hundreds of teachers will read the book during the year.

What will be the effect upon their school-room work? Will they be guided by the principles they have discussed and agreed upon? Will they make an effort to prepare each day's work in accordance with these principles, or will they continue to do as they have done heretofore, following a custom, or will they adopt and follow blindly some new way, because it was presented by some entertaining institute instructor in an entertaining manner? Whether they do, or do not do, any or all of these things, has

nothing whatever to do with the question as to whether it is necessary to understand Psychology. It is a settled fact that, both in theory and in practice, the best methods are based on psychological principles. Of course there are good teachers who make no pretensions to know Psychology. They, however, are unconsciously observing the laws of mental growth and development. But this is no argument against Psychology. They probably by mistake after mistake have come up to the position they now occupy. Had they known the laws of mental growth it would have saved much loss of time on the part of their pupils as well as themselves.

There are some persons who study the theory of mind as related to education, until they can and do write papers that are full of meaning to one class of people and are meaningless and disgusting to another class. Neither class is composed of fools, yet there are members of each class who think that the other class is composed entirely of "cranks." This still does not dispose of *Psychology*.

If a gardener is a great success, he knows the nature of plants—knows the laws of vegetable growth. The horse trainer understands horses. The mind trainer must understand mind. It is hoped, therefore, that this book will be read understandingly, and that the principles learned by studying it in connection with the studying one's own mental states, will help to shape the method of presenting the different subjects in the common schools of our state. Let the teacher be on the alert to verify a principle whenever an opportunity occurs. As he reads let him continually ask himself this question, "Where can I use this in my every-day work?"

He reads that mind grows and develops by its own activity. He says, "Of course it does," and goes into the school-room the next day and steps to the black-board and solves a difficult problem for the class. He solves it correctly too. It makes him think so hard that the pupils about conclude they have him "stalled." Not so. Mind grows by its own activity. His was active. He will grow, but how about the pupils? Whose mind is to be developed?

On the other hand, there are teachers who will do nothing whatever for their pupils. They say, "Yes, that is a very hard

problem, but you would not expect me to eat your dinner for you ; neither must you expect me to do your problems for you."

I used to think that the teacher might at least point out the front door of the hotel where I could get my dinner, since I was in a strange town. Children are often able to masticate their food before they are able to carve the turkey in the most approved style. Why not carve the turkey and give them a piece, and even cut it into small pieces for them ?

When a teacher refuses to give *any* help, he does not stimulate the mind to act. If it acts at all it is on the wrong subject. It *may* act in such a way as to develop a hatred for school and for school teachers.

Let him suggest enough to get the pupil to thinking. Let him ask himself how he can help the pupil in such a way as to give him something to think about and make him desire to think about it. To do this, he must be able to go back and think over the process his own mind went through in solving that problem. He must ask a question or make a suggestion that will cause the pupil to see what he (the teacher) saw. He will then be using the principle that "the mind grows and develops by its *own* activity."

MISCELLANEOUS.

ACCORDING to the *American Grocer* the total annual expenditure for tobacco in the United States is \$256,500,000, which represents a per capita tax of \$3.44 per annum. Cigarettes cost \$6,500,000, and chewing tobacco \$50,000,000 a year. The cost of tobacco is more than double the loss by fires. Liquor costs yearly \$700,000,000; sugar, \$187,000,000; coffee, tea, and cocoa, \$130,000,000; and schools, \$110,000,000.

TEACH the pupil to think for himself. Avoid routine. Do not be more anxious to display your own knowledge of the subject under discussion than you are to draw out that of the pupil. Make haste slowly. Be sure of each step before you attempt the next. Be thorough. Do not permit the brightest and most forward in the class to do all the answering. Devote the greater portion of your attention to the dull and backward ones. The smart ones will get along well enough. "They that are whole need not a physician."—*Popular Educator*.

A STORY OF A MATCH-BOY.—“The only good use I ever knew old postage-stamps to be put to,” said a gentleman in Boston the other day, “was before the present craze. About 1850 there was a boy who went about law offices selling matches. He was a bright, intelligent lad, and professed himself anxious for an education. An old gentleman who stood high at the bar, wishing to test the boy’s honesty on this point, told him if he would paper a good-sized closet adjoining his office with old postage-stamps, he would pay for his education. The boy at once set to work, and interested every lawyer on Court street, who saved all their stamps for him; and in due time the undertaking was accomplished, and the agreement carried out.”

In that way, the match-boy was enabled to rise in the world; and no doubt by this time, if he still lives, he is a man of consequence.—*Golden Days.*

QUERIES FOR SELF-EXAMINATION OF TEACHERS.—1. Do you love your work and take a genuine interest in it?

2. Are your pupils happy in their school life?

3. Do you do all in your power to make the school-room attractive?

4. Are you cheerful, enthusiastic, methodical in your work?

5. Are you always at your post on time?

6. Do you give your undivided attention to school duties during school hours?

7. Do you habitually read educational books and journals?

8. Do you make special and adequate preparation for each day’s work?

9. Do you endeavor to have each child feel that you are personally interested in him?

10. Do you keep parents fully informed of the doings and progress of the children?—*The School Teacher.*

COUNTRY SCHOOL DEPARTMENT.

[Conducted by W. H. CAULKINS, Supt. Tippecanoe County.]

OUR object in adding this department to the *Journal* is to furnish matter that will be of particular interest to the teacher of the country school. A moment’s reflection will convince any one that methods which work well in a carefully graded

school may fail in the usually large ungraded school, and hence different plans are required. We intend to make the articles practical, suggesting little that has not been tried and describing nothing that has not been found successful or that will not point the way to success. Much will depend, however, on the teacher's adapting the plans to the peculiar circumstances of his own school.

GETTING READY FOR SCHOOL.

Good order is the prime requisite of a school, not of the pupils alone, but equally of the teacher, and the grounds and building. The building should be not only repaired, but scrubbed and whitewashed, and the windows and the wood work cleaned. The yard should be freed from rubbish of all kinds,—papers, sticks, empty ink-bottles, etc. If the pupil finds a thoroughly clean and neat school-room and yard, presided over by a neat and smiling teacher, on his first day at school, he will unconsciously try to put himself in keeping with his surroundings. If you insist on neatness and order the first day and every day, the labor of management will be much lightened, to say nothing of improvement in the habits of the pupils. And is not one of the aims of the school to lead the pupil to form habits of neatness and order?

WINDOW CURTAINS.

We have found that white curtains are the best for school-rooms for many reasons, but chiefly because they admit plenty of light without allowing the direct rays of the sun to pass through. Two yards of unbleached muslin at each window, tacked at the top and allowed to hang free, forms a serviceable and tasty curtain. In place of rolling it up, it is better to draw the curtain to one side with a red ribbon. The red gives the room a cheerful appearance. Get the pupils to bring a few pictures to put on the walls. Encourage them to bring flowers and autumn leaves to decorate with. There is little danger of making the average country school-house too bright or too attractive. Not only does it educate the pupils' sense of taste, but it is much easier to han-

dle a school that is proud of its appearance than one which is cheerless and careless. Try it.

SHOULD A TEACHER GET A KNOWLEDGE OF HIS SCHOOL BEFORE
OPENING ?

A word of caution is necessary to those who get the history of a new school before beginning it. Remember that your informant is human and whether conscious of it or not, he is prejudiced for or against every person he talks about. Take everything with a grain of allowance. If he is the old teacher he will no doubt warn you of the bad boys you must watch. And then when John and George come to school, no matter whether determined to be bad or not, they soon discover that they are watched. Even we teachers are restless when we think we are under suspicion ; so, are you surprised when you find that John and George are fully as bad as you expected ? It is to be questioned whether the teacher should hear all about the school beforehand. If he is a true teacher he will very shortly know each pupil better than any one else ; if not a true teacher he will make as many mistakes with a previous history as without. Especially should the teacher show discretion in those neighborhoods which are in a chronic state of quarreling over family feuds. Most of all must he show himself the helpful friend of every pupil and not a special detective to watch him.

CLASSIFICATION.

The teacher should make a thorough study of the record left by his predecessor of the classification of the school. If no record was left any of the older pupils can tell you the place of each pupil and the plan of the classes. *Follow your predecessor's plan as far as possible.* Radical changes in the classification are not necessary except when a school has become entirely disorganized. A week's acquaintance with the school will show if any pupil is badly out of place. Further, the previous teacher based his classification on a year's study of the pupils and certainly ought to be presumed to have the plan generally correct. By making yourself acquainted with the grade of each pupil, you will be able to seat him the first day, and this is a much better plan than to allow the pupils to choose their seats themselves. Get each

grade as near together as convenient, and keep it so during the year. To be able to seat each pupil the first day shows the school that you understand your business and they will have more respect for you. They will know also that if you see fit to move them at any time you will do so. By studying the plan and work of the previous year you will be able to have every pupil at work in five minutes' time after the school has begun. This prevents mischief-makers exercising their ingenuity and inspires all with the feeling that you are master. With the friendship, respect, and confidence of every pupil you can not fail.

BE NATURAL.

Although already said many times, it is worth repeating that you should be perfectly natural the first day. Don't put on any airs or affect any fondness for your pupils that you do not really feel. They soon detect the sham and despise you for it. There is a difference between friendliness and gushing. Some teachers can show their interest in the pupils without speaking a word; and it is the quiet, unobtrusive *sympathy* with children that wins them to you the quickest and holds them the longest. Nothing but genuine metal will stand the test of these keen-eyed, independent lads and lasses of the country districts.

DON'T COMPLAIN.

It is appropriate at this time to speak of a custom which is too prevalent among country teachers—that of complaining. "The children are the stupidest and meanest I ever met"; "The apparatus we have is of no use and the trustees won't furnish any new"; "The school was in a dreadful state when I took it," are heard too often from teachers. In the first place it is bad manners. No doubt every other teacher is a mute, inglorious Milton whose genius is perishing in the desert a cruel fate has compelled him to live in; but, to say the least, it is bad manners, and savors very strongly of egotism for him to be constantly complaining that his work is extremely difficult, in order that he may get the more credit for carrying it through; or that he is not appreciated by "the barbarians who send their little savages to school" to him, in order that he may seem gifted far beyond "the com

mon herd"; or that he would do wonders if only he were in the right place with the proper apparatus. In the second place, the complaints generally are without foundation. Schools are just about alike the world over, and any part of the world viewed through blue spectacles would seem blue undoubtedly. Examine your school closely and you will find the children are just about as good and just about as smart as the average child; that the parents have a little more intelligence and a great deal more common sense than you credit them with; that your trustee is willing so long as the township has the means, to furnish you with all necessary appliances; and that the apparatus you already have is of much value yet. Lastly, examine yourself, and you will find that the people generally rate you at exactly what you are worth. Don't complain!

WORK TO A PURPOSE.

Prepare beforehand a rough outline of the work you intend to do during each month of the winter and regulate your progress accordingly. It is much better to have some guide towards making the work systematic than to run on indefinitely and at the end of the year to stop abruptly instead of coming to a definite close. Do not attempt to cover too much in a month's work. The attendance will be irregular, and in the country, lessons missed are seldom made up at home. Aim to keep the different studies of each grade on a level; not allowing Arithmetic or Reading, for example, to get ahead of the other branches. Leave a little time in your outline for reviews and examinations. If you find you have over-estimated or under-estimated the ability of your school, the plan may be changed at any time.

TEACHING.—If we work upon marble, it will perish; if we work upon brass, time will efface it; if we rear temples, they will crumble into dust; but if we work upon immortal minds, if we imbue them with principles, with the just fear of God and love of our fellowmen, we engrave on those tablets something which will brighten to all eternity.—*Webster.*

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

PENNSYLVANIA recently passed a law requiring each school district to maintain a school at least six months. Such a law would be of advantage to some localities in Indiana.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another; we can't do it. We will change as often as asked to do so, but must be notified of each change.

THE recent death of Mark Hopkins, the famous ex-President of Williams College, removes one of the most distinguished educators of the country. He was a man of wonderful power and personal magnetism. He stood in the front rank as a thinker, writer, orator, teacher. His influence over young people was remarkable. It was Garnet who said, "a log with Mark Hopkins on one end and a young man on the other is a university."

THAT REMINDER in last month's issue seems to have disturbed the minds of a few of our friends whose names are still on the "unpaid list." Those who are still unable to pay need have no fear that their names will be given to the county superintendent if they will write and give reasons for the delay. When a person fails to fulfil an agreement, and then allows months to pass without a word of explanation, he has no right to complain if the disappointed party comes to the conclusion that he stands in need of a special lesson on "memory."

TOO BAD! ISN'T IT?—Four letters in one day—three of them containing money—without either name or post-office address of sender. All from teachers too. The same day two letters saying, "Please change the address of my Journal to this place," without giving the old address—notwithstanding our standing notice saying that both addresses must be given. And still another letter containing 10 cent stamps to renew subscription for the Journal, when we say in italics in nearly every issue, "*Don't send us 5-ct. and 10-ct. stamps. We can't use them.*" O tempora! O mores!

THE COLOR LINE IN THE SOUTH.

There is at the present time an interesting bill before the Georgia Legislature. It is entitled "A bill to regulate the manner of conducting educational institutions in the State and to protect the rights of colored and white people, and provide penalties for the infraction of this act." It provides that no school or other educational institution conducted for the education of colored people shall receive as a pupil any white person, and that no school or other educational institution conducted for the education of white people shall receive as a pupil any colored person. Any teacher or manager of said institutions violating this act shall be guilty of a misdemeanor, punishable by a fine not to exceed \$1,000, imprisonment not to exceed six months or work on a chain-gang not to exceed twelve months, any or all, in the discretion of the court. If the institution is chartered, not only the teachers, but the president, secretary, members of the board of trustees or other persons filling the corresponding offices, who shall knowingly permit this act to be violated, are subject to indictment and punishment. Such, in brief, is the bill, as outlined in the *Atlanta Constitution*, July 12.

Why is such a bill introduced? The following facts will show the answer: In 1867 the American Missionary Association secured a charter for the Atlanta University, and founded that institution for the education of colored youth. But the well-known principles of the association, admitting no distinctions on the ground of color, forbade the closing of its doors to any worthy student who might apply for admission.

About \$150,000 have been spent in buildings and grounds, and since the opening of the University an average of \$10,000 a year have been contributed toward its support, all contributions from Northern people. In addition to the above the state has annually made a contribution to in part compensate for the fact that when Georgia got its land grant script, amounting to \$270,000, it gave it all to its State University, which admits only white students.

The occasion for the above named bill is that a few white students, mostly from the families of the professors, have been admitted to the Atlanta institution. Co-education of the races is not popular in the South.

CONTESTS OVER CO. SUPERINTENDENCY ELECTIONS.

There were seven contests over election of county superintendents last June. Some of these have been settled, while others are pending in the courts. The cases are in brief as follows:

IN MIAMI COUNTY one-half of the trustees refused to vote. Those voting, voted for a new man. The old Supt. claimed that there was

no election and refused to give up the office. The Attorney-General has ruled that the new man was elected—not on the ground that there was a tie and the auditor could cast the deciding vote, but that when a trustee is present and does not vote he gives his consent to what a majority of those voting agree upon. The opinion of the Attorney-General has been accepted and the new Supt. is in office.

IN FULTON COUNTY substantially the same condition of facts exist, except that the opinion of the Attorney-General has not been accepted and the case is pending.

IN MARTIN COUNTY, after many ballots without electing, the board adjourned to meet next day, but only *one-half* met. These proceeded to an election, all voting for a new man. In this case the opinion of the Attorney-General is that there was not a quorum present, and so there was no election, and therefore the old Supt. holds over. The case is contested and both superintendents are acting.

IN JAY COUNTY twelve trustees met. After many votes without electing, two trustees absented themselves. While out a vote was taken, in which six votes were for one man and four for another. The Attorney-General held that the man getting six votes was elected. His ruling is that when a quorum is present a majority elects. In this case the old Supt. was not a candidate before the board, but he now claims there was no legal election and is contesting.

IN FAYETTE COUNTY there were nine votes cast—five of them for a new man—but the new man was a trustee and voted for himself. The old Supt. claims that it was illegal for a trustee to vote for himself, and so refuses to turn the office over to him. The case is being contested.

IN PERRY COUNTY the man elected came to this country when only ten years old, but his father never was legally naturalized. The son supposed that he was a citizen without taking out papers for himself until he tried to hold office. The court has decided that he is not a citizen and is therefore not eligible. Thus the office is left in the hands of the old Supt. who was not a candidate, but who does not object to filling the place two years more. It is a mooted question in law as to whether the trustees can be legally called together again for the purpose of electing a superintendent, having once adjourned *sine die*.

IN BLACKFORD COUNTY the conditions are similar to those in Miami and Fulton, and the case is being contested.

In all these cases the State Superintendent is being guided by the opinion of the Attorney-General. This seems to be his only safe course.

THE well known Dixon Pencil Co. took a novel way of advertising at the National Association. Instead of helping to load teachers down with circulars they gave each one a glass of ice-cold lemonade. In those sweltering days no other mode of advertising could be mere appropriate, or more effective.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR JUNE.

[These questions are based on the Reading (ircle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

SCIENCE OF EDUCATION.—1. A knowledge of mental processes can be gained only through consciousness or introspection. Explain this statement.

2. "The primary concepts and ideas in every branch of knowledge must be taught *objectively* in all grades of school." Explain this principle of education.

3. In conducting a recitation, to what subjects should the criticisms of the class be directed?

4. Name the different types or stages of language work from the first primary year to the high school.

5. What can the teacher of Primary Geography do to bring the children into actual contact with the subject-matter studied?

READING.—1. To what does *quality* refer in reading? Name the different kinds of quality.

2. What are the general divisions of modulation?

3. How may the teaching of reading in the schools develop in pupils a love of good literature?

4. To what extent should the teacher read as a model for pupils? Why? In what grades?

5. What evil results from the error regarding punctuation, that it is to guide the voice rather than to show the sense?

6. When are exclamations followed by commas, and when by exclamations? Give example of each.

7. Give the distinction between enunciation and pronunciation.

8. How may the reading lesson be used to develop character?

9. Name three uses to which the lists of words preceding the reading lesson may be put.

10. What use should be made *by the teacher* of the Reader notes on authors? What by the pupil?

ENGLISH GRAMMAR.—1. Write two sentences each containing an adjective clause, in the one the clause to limit the word which it modifies; in the other the clause not to limit the word which it modifies.

2. What are the classes of sentences with respect to meaning? Define each class.

3. *Which* may be used as what parts of speech? Give an example of each.

4. How many genders has the noun? Why?

5. What kind or kinds of objects does each of the single relative pronouns express?

6. In what respects are the adjective and the adverb alike? How different?

7. (a) *Were* I Brutus, and Brutus Antony, there *were* an Antony would ruffle up your spirits. (b) If he *was* there I did not see him. Justify the mode of each of the italicized verbs in the preceding sentences.

8. The man who has *just* passed owns a house *worth* ten thousand dollars. Analyze.

9. Parse the italicized words in question eight.

10. (a) Correct, giving reasons for the corrections: 1. I am larger than any one in this room. (b) Where have you been to? 2. Write a sentence containing an appositional clause.

ARITHMETIC.—1. A clock gains $5\frac{1}{2}$ min. an hour; how much does it gain on June 21? 5, 5.

2. A man buys 100 lbs. of meat at 15 cts. a lb; $\frac{1}{2}$ of it is bone, on which he is allowed a reduction of $2\frac{1}{2}$ cts. a lb; what does the meat cost him?

3. A person imported 400 copies of a work at 2s. 6d. a copy; at 23 cents a shilling, what will they cost in U. S. currency?

4. If 2 lbs. of tea be worth 6 lbs. of coffee, and 1 lb of coffee be worth 5 lbs. of rice, and 10 lbs. of rice be worth 6 doz. eggs, how many eggs will 8 lbs. of tea be worth? By analysis.

5. A put into a firm \$5,000, B \$6,000, and C \$7,000; in 3 months A put in \$3,000 more, in 5 mos. B put in \$2,000 more, and in 7 mos. C put in \$1,000 more; at the end of the year they had \$52,400; what was the share of each? 5, 5.

6. What number is that which, increased by 20% of itself, and this amount increased by 10% of itself, will make \$6,600? 5, 5.

7. On a note for \$1,000, dated Jan. 1, due in 12 mos., without interest, \$100 was paid March 1, and on June 1, \$200, and the remainder paid on Sept. 1; money being worth 6% per annum, what was the remainder due on Sept. 1? 5, 5.

8. A sphere is 3 inches in diameter; what is its surface? 5, 5.

9. A cistern is 10 feet in diameter and 6 feet deep; how much beer will it hold? 5, 5.

10. From a square piece of land containing 2,500 sq. ft., I laid off a square bed containing 1,600 sq. ft., touching two sides; what is the edge of the largest square bed I can lay off out of the remainder of the piece touching the other two sides? 5, 5.

GEOGRAPHY.—1. Bound North Carolina. Locate its capital and its metropolis.

2. When it is winter in Indiana what is the season in Japan? In Australia? Explain this.

3. Why is the climate in Western Europe warmer than in the same latitude in Eastern America?

4. What are the chief products of Pennsylvania?

5. Through what States would a straight line pass from Boston to Indianapolis?

6. Where is Cape San Roque? Cape Charles? Cape Fear? North Cape? Cape Farewell?

7. What is the form of government of Ireland?

8. What is the cause of the decline of population of Nevada?

9. Name the chief races of men, naming, in general, the region inhabited by each.

10. What is the height of Mount Washington?

U. S. HISTORY.—1. Where lay the Spanish, French, English and Dutch possessions in the Americas early in the 17th century?

2. Give an account of the settlement of Pennsylvania.

3. The Mexican War: In whose administration began? Two campaigns. What changes in territory resulted? Give something of the subsequent history of the two Generals who became most distinguished in this war.

4. In whose administration were the Alien and Sedition Laws passed? What was their purpose, and how were they received?

5. What officers constitute the President's Cabinet, and how are they appointed? Name the members of President Cleveland's Cabinet, June, 1887.

PHYSIOLOGY.—1. Write on the subject of the skeleton, using the following outline:

(1) Composition of bones—

a. In early life.

b. In old age.

c. Precautions against injury.

d. Method of repair when broken.

(2) Arrangement of the bones of the body into groups or divisions.

(3) Joints of the body classified, with illustrations.

(4) Construction of the knee joint—

a. Bony parts, how articulated.

b. Attendant parts necessary to motion.

c. Accidents and diseases possible to each part.

(5) Rules for the care of the joints.

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. The Spanish possessions covered what is now Florida, parts of Georgia, Alabama, Mississippi, and Texas; the French, all of Canada, parts of New York, Pennsylvania, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Texas, and all territory west of the Appalachian range; the English, all of what is now New England, all of Virginia, Maryland, and Delaware, and parts of Pennsylvania and North Carolina; and the Dutch, all of New Jersey and parts of New York and Connecticut, and claims to Delaware.

2. Pennsylvania was really conquered by the English from the Dutch early in the 17th century, and became a proprietary colony. In 1681, to furnish a refuge to the Quakers from the persecutions to which they were subjected, Wm. Penn received from Charles II, in payment of a debt due his father from the British government, a grant of the territory, and in 1682 he bought Delaware from the Duke of York, and added it to Pennsylvania. The same year he landed with a colony on the Delaware River, and in a friendly spirit bought the land from the Indians, and made a treaty with them. In 1683 he laid out Philadelphia. The progress of settlement east of the mountains was rapid. The proprietor appointed the governor, while the people elected the assembly, the two together making the laws. This condition of things, with but slight changes, remained till 1776. The inhabitants of the colonies being averse to war grew and prospered, but excited animosity in the minds of other colonists, because they would not join in the wars against the Indians.

3. It was begun in the administration of President Polk. Certain territory between the Neuces and the Rio Grande was claimed alike by Mexico and by Texas. Early in 1846 President Polk ordered Gen. Taylor to occupy the disputed territory with United States forces. Large numbers of Mexicans crossed into the territory, and drove Gen. Taylor back towards Brownsville. At Palo Alto on his return he met the Mexicans, much greater in number than his forces, and after a half-day's battle defeated them. Before this, a scouting party sent out by him under command of Captain Thornton had been surprised, some killed and wounded, and the remainder captured. This he regarded as a declaration of war, as did Congress afterwards. Taylor continued his campaign, beating the Mexicans at Resaca de la Palma, and taking possession of Matamoras. From there he went forward into Mexico, driving the enemy,—a larger force than his own,—into Monterey, which, after four days' storming he captured; and being joined by Gen. Wool he went on to Saltillo, where his command was seriously weakened by officers and men being taken from it, for Gen. Scott's army. Notwithstanding this he beat Santa Anna and the Mexicans so badly at Buena Vista that the north-eastern portion of Mexico was left in possession of the Americans, when Taylor returned

to the United States. Early in 1847, Scott was sent with a large number of vessels to attack Vera Cruz, which yielded in March. The coast line being taken charge of by the naval force, Scott, to avoid the sickness in the south part of the country, pushed on to the City of Mexico, remaining at Puebla, which was high and cool. In August he marched again for the capital, and after five victories gained in one day, at Contreras, San Antonio, two at Churubusco, and the final one at Mexico, he entered into negotiations with Santa Anna under the walls of the city. In three weeks, satisfied that Santa Anna was deceiving him, he attacked and captured Molino del Rey, then Chapultepec, and finally the City itself, Santa Anna having abandoned it. This virtually ended the war. Gen. Taylor retired to his plantation in Louisiana, and was elected President in 1848. Scott returned, retaining his position of Commander-in-Chief of the U. S. Army. In 1852 he was nominated by the Whigs for President, and defeated by Pierce. On the breaking out of the War of the Rebellion he found himself, by reason of his age and infirmities, unable to bear the labors, and resigned his position in 1861, and died at West Point in 1866.

4. In that of John Adams. Their object was to make it legal to arrest any foreigner in the United States, whose presence seemed to be dangerous, or who should speak evil of the government. By the Federalists as sound, wholesome, and necessary. By the Republicans as subversive of personal liberty. Their result was the defeat of the Federalists.

5. The Secretaries of State, Treasury, War, Navy, Interior, Att'y General, and Post Master General. Appointed by the President by and with the consent of the Senate.

Secretary of State.....	Bayard.
Secretary of Treasury.....	Fairchild.
Secretary of War.....	Endicott.
Secretary of Navy.....	Whitney.
Secretary of Interior....	Lamar.
Attorney General.....	Garland.
Post Master General.....	Vilas.

PHYSIOLOGY.—1. The human skeleton, as ordinarily so termed, is the framework of bone and cartilage which gives the general shape of the body. At first entirely of cartilage, the most of it becomes ossified by deposits of carbonate and phosphate of lime, of soda and of salt. Thus in early life, when there is a preponderance of cartilage, the skeleton is more elastic, tougher and softer than later on, when the excess of earthy matter makes it brittle. In childhood special care should be taken not to have the position, as in a desk, uncemely or strained, as the bones are liable to become bent and the osseous deposit makes the deformity permanent.

When the bones are damaged or broken, as in injury to other parts of the body, the undifferentiated blood corpuscles (*i. e.*, those white corpuscles not assigned to any special work before) are sent to the point of injury, and, if the conditions are favorable, at once begin the work of repair.

Bones are said to be joined together by articulation with ligaments, by sutures (dovetailing), and by juxtaposition (or placing close together). At the knee joint the bones to be articulated are enlarged so as to give leverage power to tendons of muscles passing over them. Over each head passes the synovial membrane, which then bends back so as to enclose the joint and pass to the opposite head. This membrane secretes the lubricating fluid of the joint. In front, and as a protection to the joint from injury, inasmuch as it is in special danger, there is placed and fastened by ligaments a little cap-bone, known as the patella.

Joints are liable to injury from strains, from cuts or bruises, from blows, etc., and as, when injured, there is always danger of their becoming permanently stiff, great care should be exercised in case of damage to them.

READING.—1. Quality of voice has reference to purity of utterance, *i. e.*, to whether tones are vocalized or are partly aspirated. Thus we have the pure, the orotund, the guttural, the aspirate, etc., qualities.

2. The teaching of reading, after it has passed beyond the mechanical stage, can develop and ought to develop a taste for that form of composition which, while not neglecting the fancy, yet cultivates the better sentiments, desires that are elevating, purposes that tend to lift up—or, at least not to degrade, and thoughts that are helpful toward right living. Judicious selections for supplementary reading, for an occasional reading to the class by the teacher, etc., with hints as to where more of the same sort of interesting matter may be found, are all useful in this direction, as well as selecting and unfolding special beauties.

4. The teacher may read as a model for pupils in the beginning, but less and less as the pupil grows older, as a rule. The best expression is that which is natural, *i. e.*, that which arises from the thought or sentiment to be expressed as understood by the reader, not as understood by some one whom he imitates.

5. An altogether arbitrary and jerky method in reading.

6. (a) When an exclamatory expression follows, of which the word is but the beginning, or introduction, the comma follows the exclamatory word, and the exclamation point is thrown to the end of the sentence. (b) If the whole sentence is not exclamatory, however, the exclamation point follows the exclamatory word. Examples: Yea, how great is the glory of God! Alas! I fear he can not succeed.

7. Enunciation is the distinct utterance of the sounds of a word;

pronunciation the utterance of the word as a whole, with proper accentuation. A person may pronounce correctly and yet have an indistinct enunciation.

8. By such skillful indirect and unseemingly incidental use of proper sentiments, worthy actions, just and wise thoughts found here and there in the lessons, as will make a permanent and helpful sentiment in the child-mind. Care should be exercised here (1) to make the teacher's own life correspond; (2) not to harp on this so much as to make it distasteful.

9. To aid in enunciation, to enable the pupil to recognize the words promptly, to enable him to pronounce them readily, and to practice him in their various shades of meaning by his use of them in original sentences.

10. To freshen his own thought, to investigate the subject more fully, to prepare interesting notes of his own, to avoid feeding his pupils on too much "cold victuals." The pupil should use these notes as intended simply to be helpful and suggestive to him in preparing his lesson, and should be taught by skillful questioning not to limit his information to categorical answers bearing upon the notes.

SCIENCE OF EDUCATION.—1. It means the turning of the attention inward to see what is going on in our own mind at the time or afterward. Since our own mind is the only one we have access to, it is only by this kind of study that we gain a knowledge of mental processes.

2. Primary concepts can be gained from objects only. No one can form a primary concept of a color by listening to some talk about it.

3. Don't know what it means.

4. The first five years' work should be upon the art side of language. No attempt should be made at definition and no technical terms should be used. Good usage should be taught. The next three years may be spent upon both art and the science sides—the science predominating.

5. May take the pupils into the yard and surrounding country.

GRAMMAR.—1. *a.* The evil *that men do* lives after them.

b. Milton, *who was a blind poet*, wrote "Paradise Lost."

2. A declarative sentence affirms or denies.

An interrogative sentence asks a question.

An imperative sentence expresses a command or an entreaty.

An exclamatory sentence expresses sudden thought or feelings of surprise.

3. (1) Relative pronoun; as, Water, *which* is composed of oxygen and hydrogen, covers three-fourths of the earth's surface.

(2) Interrogative pronoun; as, *Which* will you choose?

(3) An adjective; as, *Which* ticket do you intend to vote?

4. Strictly speaking, nouns have two genders, masculine and feminine, determined by the sex of the objects which the nouns represent. The term neuter is applied to names of objects that have no sex.

5. *Who* represents persons; *which*, the lower animals and inanimate objects; *that*, persons, animals, and things.

6. They both add a thought to the words which they modify, and both may admit of comparison. Adjectives belong to nouns and pronouns; adverbs, to verbs, adjectives, and other adverbs. Some adverbs have a connective use.

7. In the first sentence, the italicized verbs are both in the subjunctive mode, because they imply that the statement in the condition is contrary to fact. In the second sentence, the italicized verb is in the indicative mode, because the condition is assumed as real.

8. This is a complex, declarative sentence, of which "The man owns a house worth ten thousand dollars" is the principal clause; "Who has just passed" is the subordinate clause. *Man* is the subject nominative, modified by the article *the*, and by the relative clause *who has just passed*. *Owns* is the predicate verb, having for its complement the direct object *house*, which is modified by the article *a*, and by the adjective phrase *worth ten thousand dollars*: of which phrase *worth* is the principal word, modified by the adverbial phrase *ten thousand dollars*. Of the subordinate clause, *who* is the subject nominative unmodified; *has passed* is the predicate verb, modified by the adverb *just*.

9. *Just* is an adverb of time, modifying the verb *has passed*. *Worth* is a qualifying adjective, used to modify the noun *house*. *Dollars* is a noun, common, neuter, third, plural, objective, governed by a preposition understood. This use is sometimes called the objective adverbial.

10. I am larger than any one else in this room. Where have you been? The fact *lightning is identical with electricity* was demonstrated by Franklin.

GEOGRAPHY.—1. North Carolina is bounded on the north by Virginia; east, by the Atlantic Ocean; south, by South Carolina and Georgia; west, by Tennessee. Raleigh, the capital, is situated near the centre of the state, six miles west of the Neuse River. Wilmington, the largest city, is in the southeastern part of the state, on Cape Fear River.

2. Japan being in about the same latitude as Indiana, has winter at the same time. Australia, being in the southern hemisphere, will have summer when it is winter in Indiana.

3. Because the warm current of the Gulf Stream washes the western shores of Europe, and also the warm southwest or trade-winds modify the climate.

4. Coal, iron, petroleum, agricultural and dairy products.

5. Massachusetts, Connecticut, New York, Pennsylvania, Ohio, Indiana.

6. Cape San Roque is the extreme eastern point of South America, projecting into the Atlantic Ocean. Cape Charles forms the southern point of the peninsula, on the east of Chesapeake Bay. Cape Fear, on the southern coast of North Carolina, projects into the Atlantic Ocean. North Cape, the most northern point of Europe, projects into the Arctic Ocean. Cape Farewell, the southern point of Greenland, projects into the Atlantic Ocean.

7. Ireland has no independent government, but is subject to the British sovereign, who appoints a lord-lieutenant to reside at Dublin.

8. The census of 1880 shows that the population of Nevada had doubled since 1870. Statistical almanacs for 1887 give the same population as the census of 1880, showing that this is the latest official report. The failure of the silver mines has nearly depopulated certain mining districts, and possibly has reduced the population of the Territory. [The question is not a fair one.—ED.]

9. (1) Caucasian, or White race, occupying western Asia, Europe, the Mediterranean region of Africa, and by emigration much of the New World. (2) The Mongolian, or Yellow race, occupying eastern Asia, not including India. (3) The African, or Negro race, occupying all of Africa south of the Sahara. (4) The Australian, a Black race, occupying Australia and neighboring islands. (5) The Malayan, or Brown race, occupying the Malay peninsula, the Indian Archipelago, and most of the islands of the Pacific and Indian Oceans. (6) The American, or Copper-colored race, the early inhabitants of the New World.

10. 6,293 feet.

ARITHMETIC.—1. $24 \times 5\frac{1}{2}$ min. = 132 min., or 2 hr. 12 min., gain. Ans.

2. $15\text{¢} - 2\frac{1}{2}\text{¢} = 12\frac{1}{2}\text{¢}$; $100 \times 12\frac{1}{2}\text{¢} = \$12\frac{1}{2}$. Ans.

3. $400 \times 2\frac{1}{2}$ shillings $\times 23\text{¢} = \$230$. Ans.

4. If 10 lb of rice = 6 doz. eggs, 1 lb of rice = $\frac{1}{10}$ of 6 doz. eggs, or $\frac{3}{5}$ doz. eggs. 5 lb of rice, or 1 lb of coffee, is worth $5 \times \frac{3}{5}$ doz. = 3 doz. eggs. 6 lb of coffee, or 2 lb of tea, = 6×3 doz., which is 18 doz. eggs. 1 lb of tea is worth $\frac{1}{2}$ of 18 doz. = 9 doz. 8 lb of tea are worth 8×9 doz. eggs = 72 doz. eggs. Ans.

5. $\$5000 \times 12 + \$3000 \times 9 = \$87000$ for 1 mo., A's.

$\$6000 \times 12 + \$2000 \times 7 = \$86000$ for 1 mo., B's.

$\$7000 \times 12 + \$1000 \times 5 = \$89000$ for 1 mo., C's.

$\$262000$ for 1 mo., total.

$\frac{87}{262}$ of $\$52400$, gain, = $\$17400$, A's,

$\frac{86}{262} = \$17200$, B's.

$\frac{89}{262} = \$17800$, C's.

6. 6600 is $\frac{1}{10}$ of 6000. 6000 is $\frac{2}{3}$ of 5000. Ans.
 7. \$1000 - \$300 = \$700. \$700 \div 1.02 = \$686.274 +. Ans.
 8. $(3 \text{ in.})^2 \times 3 \cdot 1416 = 28.2744 \text{ sq. in.}$ Ans.
 9. $10^2 \times .7854 \times 6 = 471.24 \text{ cu. ft.}$
 $471.24 \text{ cu. ft.} \times 1728 \text{ cu. in.} = 814302.72 \text{ cu. in.}$
 $814302.72 \text{ cu. in.} \div 282 \text{ cu. in.} = 2887.59 + \text{beer gallons.}$
 10. $\sqrt{2500} = 50$; $\sqrt{1600} = 40$. $50 - 40 = 10 \text{ ft.}$ Ans.

DEPARTMENT OF QUERIES AND ANSWERS.

[This Department is conducted by J. C. GREGG, Superintendent of the Brazil Schools.
 Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

- [10] What is the most terrific volcano in the world?
 WILSON PALMER, *Mitchell, Ind.*
- [11] Should fear be made an incentive to obedience? Why?
 DELLA COFFEE, *Spencer, Ind.*
- [12] A street is 40 feet wide; on each side are buildings 40 and 50 feet high respectively; at what distance from the base of each wall, must a ladder be placed to reach exactly to the top of either building, and how long must the ladder be? Solve if possible by arithmetic.
 ONO, *Stockton, Cal.*
- [13] Where is the Key to the Bastile?
 W. T. LONGWITH, *Hector, Ind.*
- [14] Solve example No. 2, page 224, Ray's New Higher Arithmetic, using only twenty-four figures.
 ED.
- [15] How many answers can be found for example No. 5, page 341, Ray's New Higher Arithmetic? Answer must be received by August 14th.
 ID.

ANSWERS.

- [5] The infinitive mode as such has no object. Nor does any mode. The verbal force of any transitive verb requires a complement, without regard to any other property. This complement is expressed by the objective case, with the infinitive as well as with other verbal forms.
 SAMUEL E. HARWOOD, *Spencer, Ind.*
- [6] "He is in the nominative absolute by pleonasm. This is shown by change of order in the sentence. "Let him that is unjust, etc." "Him" is the objective subject of the infinitive "to be," the sign "to" being omitted after such verbs as "let." Id.

[7] From a great number of solutions we select the following :

$$\begin{aligned} \frac{8}{9} \text{ the saddle} &= \frac{7}{8} \text{ the horse;} \\ \frac{1}{9} \text{ " " } &= \frac{1}{28} \text{ " } \\ \frac{8}{9} \text{ " " } &= \frac{8}{28} \text{ " } \\ \text{and both} &= \frac{37}{28} \text{ the horse} = \$185; \\ &\frac{1}{28} \text{ " } = \$5; \\ &\frac{8}{28} \text{ " } = \$45 = \text{saddle;} \\ &\frac{28}{28} \text{ " } = \$140. \end{aligned}$$

NINA BULL, *Greentown, Ind.*

We are all aware that there are many disputed points in our grammars, and as such is the case I beg leave to differ from Prof. Harwood's view of the parsing of the word "*alone*" in the following sentences: "*The secretary stood alone.*" I can not see that *alone* is a definitive adjective in the above sentence. I think it is descriptive and plainly describes the *man* in regard to his *position, situation, or condition*, and is used in the predicate after the impure copula *stood*, and modifies *secretary*.

"*Alone*" certainly does not point out the man, but simply describes him as above stated, and means that he was *single* or *without company*. It may be used as an *adverb*.

The same is true of "*alone*" in the following sentence: "*In a clear and open conscience, alone lies true happiness,*" etc.

J. B. V., *Solsberry, Ind.*

Nos. 8 and 9 remain unanswered.

Answers have been submitted by the following persons, for which they will please accept thanks:

Samuel E. Harwood, Nos. 5, 6, and 7; Ono, No. 1; Henry Sturman, No. 7; W. T. Longwith, No. 7; Della Coffee, No. 7; Ben. F. Hardin, Nos. 5, 6, and 7; W. D. H., No. 3; Wilson Palmer, No. 7; Joshua Hayes, Nos. 5, 6, and 7; Eva Vance, No. 7.

The couplet quoted in No. 8 was the subject of a graduating oration at Antioch College in 1860 (?) Can not Prof. Bell give us the author?

Good solutions to queries No. 2 and 3 were sent in by Prof. A. M. Scripture, Clinton, N. Y., but were received too late for publication. We trust he will favor us often.

Charlie M. McConnell sent an elegant solution for No. 4, but too late for publication. We should have used it if sent in time.

Credit will be given each month for queries or answers sent in.

E. A. Clarke, formerly of Indiana, who was shot and slightly wounded by his high school teacher, has been completely exonerated by the board of trustees, and re-elected Supt. of the schools of Henderson, Ky.

MISCELLANY.

THE Commencement of the American Normal at Logansport will occur August 4th.

OUT of the twenty-one graduates from the State University last June, seven have engaged to teach and four more are expecting to teach. Prof. Boone seems to be able to make the profession popular.

SHELBYVILLE has been fortunate in securing the services of J. C. Eagle to take charge of its schools. Already plans have been consummated to connect a training department with the schools, with a view to preparing the high school graduates for teaching. Mr. Eagle did such work successfully at Edinburg.

MONTEAGLE ASSEMBLY, located in the mountains of Tennessee, is growing to be an institution of large proportions. Prof. L. S. Thompson, of Purdue University, has been recalled regularly for several years in succession to conduct the Art Department. He recently gave a lecture there which is highly complimented in the papers.

THE GIRLS' HIGHER SCHOOL, located in Chicago, with Miss Rebecca S. Rice and Miss Mary E. Beedy as principals, is an excellent school. Miss Rice and Miss Beedy are both graduates of Antioch College and were students under Horace Mann. Any one desiring to send a daughter away from home to school could not do better than to place her under the care and training of these cultured ladies.

THE WESTERN SCHOOL JOURNAL, the principal educational paper of Kansas, has changed hands and is now edited by R. W. Turner, a former county superintendent. The two issues made by the new proprietor indicate enterprise and ability. Mr. Turner has recently "taken in" the *Nebraska Teacher*. Nebraska, as well as every other state, ought to have educational spirit and state pride to support a paper of its own.

THE READING CIRCLE books for this year are unusually popular. There seems to be a general feeling that the selections are "just the thing." Sully's Hand-book of Psychology, by D. Appleton & Co., is said by good judges to be one of the best of its class; and The Light of Two Centuries, by A. S. Barnes & Co., is an exceedingly attractive book in the line of literature. The Reading Circle ought to enroll at least 5000 members the coming year.

GIBSON COUNTY.—The Institute in this county was held July 25-30. The principal instructors were W. W. Parsons, of the State Normal, and Jas. K. Beck, of Bloomington. This of course insured good work. State Supt. La Follette, Geo. F. Bass, and W. A. Bell each spent a day in the institute, and their assistance was appreciated. The county

employs 155 teachers; 145 of these enrolled the first day. This speaks well for both superintendent and teachers. Supt. Robinson is doing a good work.

THE OHIO STATE TEACHERS' ASSOCIATION met at Akron June 28, 29, and 30. The attendance was good at this, the 40th anniversary of the organization at this place in 1847. There seemed to be a general longing for the waterbrooks, however, and a regret that the meeting was held in the state. Some excellent papers were presented, but the discussions lacked the energy, directness, and brevity of those of Hoo-sierdom. In the absence of President Peaslee, Dr. Williams, of Delaware College, was elected President of the Association, and read an excellent paper upon "The Place of Grammar in a School Curriculum." The ladies in attendance were not so many as usual, but they largely outnumbered the gentlemen.

EARLHAM COLLEGE at its last commencement graduated a class of nineteen, the largest in the history of the college. The college was never before so prosperous. In connection with the commencement exercises the corner-stones of two new buildings were laid with appropriate ceremonies. The principal speakers were Hon. Barnabas C. Hobbs and Joseph Moore, both former presidents of the institution. One of these buildings will contain a chapel, museum, library, art gallery, recitation rooms, etc.; the other is called the Parry Laboratory, as the money with which it is to be erected was given by Mordecai Parry, of Richmond. J. J. Mills, formerly of the Indianapolis schools, is giving great satisfaction as president.

THE KENTUCKY STATE TEACHERS' ASSOCIATION met at Louisville July 7, 8, and 9. At a meeting of the County Superintendents the day before, there were not enough present to organize without using up the audience. The pay which most of these receive, however, and the lack of railroad facilities, would hardly justify their attendance. The attendance at the State Association was fair and the interest good. A criticism upon the character of the discussions might be that they bore too much upon other than teachers' work. There are some very earnest workers in the association; however, such as Profs. Bartholomew, Goodwin, Gaines, Roark, Hodges, Mell, Goodright, Allen, and others, and the prospect in Kentucky is brightening.

KINDERGARTEN TRAINING SCHOOL.—In 1882 the Indianapolis Free Kindergarten and Children's Aid Society organized a Normal Kindergarten Training School. During the five years, fifty-eight young ladies have completed the course, and have received diplomas. Nearly all of these are now engaged in teaching in public schools or private kindergartens. Each year the Society offers twelve free scholarships on condition that those taking these scholarships shall practice in the Free

Kindergartens of Indianapolis. Opportunity for practice in private kindergartens is given to those who pay tuition.

The next normal class will be formed August 17th, but pupils may enter later. A school for Primary Instruction has also been opened in connection with the Kindergarten Normal School. This course is completed in five months.

The Superintendents of Public Instruction have expressed their confidence in the value of this instruction to the district school teacher.

For catalogues or further information, address the principal, Mrs. E. A. Blaker, 797 N. Meridian St., Indianapolis.

PURDUE UNIVERSITY has suffered the loss of four of its professors since the close of the last school year. They all went because they were offered higher salaries at other places. No one now receives less than \$2000. It is a credit to Purdue that it had men who were in such demand, but it is to be regretted that it could not pay able men as much as they are worth to other institutions.

It is gratifying to learn that the trustees have been able to fill the vacancies with able and tried men. The following persons have been added to the faculty either to fill vacancies or as additions:

John U. Nef, Ph. D., a graduate of Harvard, and also of a university at Munich, Professor of Chemistry; Joseph C. Arthur, D. Sc., a graduate of Iowa Agricultural College, formerly Professor of Botany in Wisconsin University, Professor of Botany; Albert E. Phillips, C. E., a graduate of Union College, N. Y., Professor of Civil Engineering; T. D. Henebach, a graduate of Michigan University, Prof. of Veterinary Science; Mrs. Emma P. Ewing, of Chicago, Instructor in Domestic Economy; Mrs. Emma Mont. McRae, so well and so favorably known in Indiana, Lady Principal and Professor of English Literature; Stanley Coulter, now in Cotes College, Prof. of Zoology and Assistant Principal.

This is a strong faculty. Pres. Smart has returned from Europe, and at the opening of school in September everything will be in perfect working order, and the prospects are flattering for the most prosperous year in the history of the institution.

PRIMARY EXAMINATIONS.

The examination for primary license, to be held in August of this year, and annually in June, July, and August, hereafter, will embrace questions upon all the legal branches, but of such a character as to apply to primary work, particularly.

The same literary reviews will be exacted of applicants, and the same percents will govern the grading as obtain in the common school

license; but if any primary teacher chooses to take the regular monthly examination he may do so.

Questions will be furnished all the County Superintendents in time for the regular monthly examination, August 27, 1887.

HARVEY M. LA FOLLETTE,
Supt. Pub. Instruction.

READING CIRCLE NOTES.

Thirty-two counties are represented in the examination of '87.

The average of the class in professional studies was 86 percent.

Certificates will be sent to applicants during the month of August.

The papers on Green's History were pronounced superior, both in the intelligent answers given, and the accurate knowledge of events.

If any applicant upon receiving his certificate of examination finds a branch omitted, he should write to the secretary, and these omissions will be corrected.

There are 7 MSS. on Green's History, with no name; 5 on Barnes' History; 4 on Brooks' Mental Science; 6 on Hailman's Lectures; 2 on Hewett's Pedagogy; and 2 on English Literature.

THE NATIONAL EDUCATIONAL ASSOCIATION.

The National Association held at Chicago was much the largest educational meeting ever held in the United States. The estimates ranged all the way from 8,000 to 15,000. Suffice it to know that it was so large that no hall would hold all and no voice could make all hear. Indiana was largely represented, and spent one evening in a very pleasant re-union.

The excessive heat, which was continuous during the meeting, detracted much from the interest, and much from the comfort of the members. According to the editor of the *Arkansas Traveler*, "Chicago is a decided success as a 'summer resort,' as it seems that most of the summer in the country has resorted there."

By a nearly unanimous vote of the board of directors it was decided to hold the next meeting at San Francisco, Cal., in case satisfactory terms can be made with the railroads.

Aaron Gove, Supt. of the Denver schools, was elected President. W. A. Bell was elected Counselor, and represents Indiana on the Board of Directors.

THE NATIONAL EXPOSITION.

The school exhibits filled the main floor and galleries of the entire south half of the Exposition Building, with the exception of a number

of booths and stands at the extreme circumference of the main floor. These constituted the "annex", and were occupied by exhibits of school-books, school-furniture, and the like.

Among the exhibits the states of Illinois and Wisconsin occupied the greatest space, inasmuch as the legislatures of these states had appropriated considerable sums of money in aid of the enterprise. The exhibits of Illinois were admirably arranged and afforded a complete and satisfactory survey of the work done in all departments, from the primary school to the university. In the latter, however, the technological and industrial phases had been singled out as most interesting. The Chicago schools and Cook county added much to the interest of the Illinois exhibit.

The Wisconsin exhibit consisted of a number of disconnected specimens of fair work from different schools, with a sprinkling of inferior kindergarten work from primary departments, and some good black-board work from one of the normal schools of the state.

Indiana had no state appropriation to aid her, and was represented by only two cities, La Fayette and La Porte. Nevertheless her exhibit, even in extent, compared favorably with those of the states named. This was largely due to its location in the very heart of the main floor, and to the fact that the tables and booths of the La Porte exhibit were united into one by suitable inscriptions on canvas stretched between them. La Fayette made an excellent showing considering the fact that the entire display was from one building, the Centennial, of which Miss M. Hazlett is principal. Most persons thought that the colored designs for carpets, wall paper, china, frescoes, etc., were high school work, but this is a mistake, everything in the display was from Miss Hazlett's building. The display was very complete. There was work from every pupil in every grade. Every subject taught was also represented, and in such a way as to indicate the methods of instruction. It well repaid careful study.

La Porte occupied two large tables and racks, and three extensive booths, covering with her exhibit as much space as Wisconsin. The exhibit gave a full insight into the work of her schools in all departments and in all subjects taught. The manual work in the primary and grammar departments was arranged so as to show the gradual progress from grade to grade, and the written work in arithmetic, geography, grammar, history, natural history, and, particularly, composition showed how much manual work aids the development of the pupil in these studies. Great interest was taken in one stand in which Supt. Hailman exhibited the "typical work" of a number of children. From week to week specimens of the work of these in all subjects had been preserved and were exhibited here so as to show the continuous development of each child.

An entire booth was devoted to the exhibit of clay work, which is

utilized in the La Porte schools as an aid in drawing and painting, as well as in the studies of form, number, mensuration, natural history, and geography. Another booth was given to a full exhibit of drawing and painting on paper, giving a survey of the rapid development secured by what Supt. Hailman calls the "Children's Method."

A number of other states were represented by a few choice specimens of work from city schools and from charitable and corrective institutions.

Among special departments of the exhibit, the Manual Training and the Kindergarten Departments were most prominent. The Manual Training Schools of St. Louis, Toledo, Chicago, the Rose Polytechnic School of Terre Haute, and other similar institutions were fully represented, and proved by the excellent work exhibited the efficiency of their organization and the great importance of these schools. The display of Rose Polytechnic Institute was specially attractive and many of its features were unique.

The Kindergarten Department constituted one of the chief attractions of the Exposition. Its chief features were the exhibit of Mrs. Eudora Hailman's Training Class of La Porte, Ind., the exhibit of the Chicago Free Kindergarten Association, of Dr. David Swing's Free Kindergarten, the Kindergarten Club of Chicago, and an exhibit of the possibilities of some phases of the work prepared by Miss Bessie E. Hailman.

Mrs. Hailman's exhibit was declared by hundreds to be the most attractive as well as the most instructive feature of the Exposition. In artistic beauty of form and color and logical arrangement it stood unparalleled. Scores of kindergartners swarmed around the booth, taking notes and gathering information. Being placed in the immediate vicinity of the Indiana exhibit, it added much to the value and appearance of the latter.

The Art Exhibits were collected on the galleries. They evinced great advancement in the efforts to introduce drawing in the schools of our country. There was great uniformity in the work, probably due to the fact that the majority are guided in their work by the Walter Smith System. Very healthy independence of work appeared, however, in a choice exhibit of the public schools of Moline, Ill.

Notwithstanding that on account of the lack of any appropriation by the last Legislature it was impossible for Indiana to make a state exhibit in the Educational Exposition at the National Educational Association, the display made by the city schools and by Rose Polytechnic Institute fully equaled the display made by any other state except Illinois.

Supt. Holcombe appointed a committee of superintendents in March to canvas the matter and attempt to secure the materials for a state exhibit; but after making some attempt to do so it was decided that

the failure of the Legislature to make any appropriation, and the expiration of the school term in a great majority of counties, would render it impossible to prepare an exhibit that would do the state credit.

It is very evident from the high character of the exhibits made by the few cities that were able to participate, that had circumstances rendered a complete State Exhibit possible, it would have been one in which all could take pride.

GEMS OF THOUGHT.

“So nigh is grandeur to our dust,
So near is God to man,
When Duty whispers low, ‘*thou must,*’
The youth replies, ‘*I can.*’”

Life is made up, not of great sacrifices or duties, but of little things in which smiles and kindnesses and small obligations, given habitually, are what win and preserve the heart and secure comfort.—*Sir Humphrey Davy.*

Habit is a cable; we weave a thread of it each day, and at last we can not break it.—*Horace Mann.*

He that does good to another does good also to himself, not only in the consequence, but in the very act; for the consciousness of well-doing is in itself ample reward.—*Seneca.*

“Throw open the window and fasten it there,
Fling the curtain aside and the blind,
And give free entrance to heaven’s pure air,
‘Tis the life and the health of mankind.”

“The young mind, impressible and soft, with ease
Imbibes and copies what it hears and sees,
And through life holds fast the clew
That education gives it, false or true.”

Lost, yesterday, two golden hours, each set with sixty diamond minutes. No reward is offered, for they are gone forever.—*Horace Mann.*

PERSONAL.

R. A. Chase, of course, stays at Plymouth.

Thos. Duncan is the best man at Francisco.

A. J. Snoke grows in popularity at Princeton.

W. J. Bowen will serve a second year at Fowler.

Harvey Lucas directs school matters at Owensville.

L. W. McDonald will "wield the birch" at Patoka.

S. M. Rutherford is high school principal at Lebanon.

A. G. Neal will train the youth at Jolietville next year.

C. N. Peak, of Aurora, takes the North Vernon schools.

A. B. Stevens will continue to serve as Supt. at Angola.

Henry Gunder has been re-elected at North Manchester.

A. J. Loughery is principal of the Edinburgh high school.

N. C. Johnson is principal of the schools at Oakland City.

Chas. Pulliam, a graduate of Wabash, will teach in Mt. Vernon.

Chas. Crumpacker is still principal of the Ladoga Normal School.

E. A. Lyman is the new principal of the Kendallville high school.

A. J. Whiteleather has decided to remain at Bourbon another year.

Stella Conger will remain at the head of the Shelbyville high school.

Edward Taylor will continue to superintend the schools at Vincennes.

Worth Reed has been promoted to the principalship of the Linwood schools.

F. A. Andrews has been elected to take charge of the Charlestown schools.

J. M. D. Huddleson will see to it that the schools at Hazelton are all right.

C. A. Dugan has succeeded G. W. A. Lucky as Supt. of the Decatur schools.

P. P. Stultz has been re-elected Supt. of Mt. Vernon schools, at a salary of \$1500.

Edwin S. Monroe will remain in charge of his home schools in the village of Farmersville.

Jos. W. Wiley, a graduate of the State University, will take charge of the Lebanon schools.

E. E. Griffith, Supt. of the Frankfort schools, is spending his summer vacation in Europe.

P. V. Voris, for several years past at Jamestown, will have charge the coming year at Hagerstown.

Sheridan Cox has been elected Supt. of the Kokomo schools for the 15th time, at an increased salary.

T. J. Sanders filled out the school year at Warsaw so well that he has been re-elected for two years.

E. R. Smith will remain in charge of the Chauncey schools, where new school facilities will be provided.

J. W. Carr, principal of the high school at Bloomington, takes the high school at Muncie, at an increased salary.

W. S. Blatchley, a graduate of the State University (1887) will teach natural science in the Terre Haute high school.

W. H. Wiley, Supt. at Terre Haute, is not in robust health, and at present is in the lake region trying to recuperate.

E. W. Wright, Supt. of the Kendallville schools, was elected president of the Northern Indiana Teachers' Association.

Miss Alta Blackmore, of Aurora, is strongly recommended as an institute worker, in both primary and advanced work.

Wilson J. McCormick, A. B. (Indiana University) will remain another year in charge of the schools of New Harmony.

C. H. Eigemann, of the class of '86 of the State University, goes to California as principal of the Santa Paula high school.

W. H. Rucker has been promoted from the principalship of the high school to the superintendency of the Lawrenceburg schools.

D. W. Thomas has done his first year's work so well at Elkhart that he has been re-elected with an advance in salary of \$200.

N. Newby, of the State Normal, is spending his summer vacation at Wichita, Kan., near which place he has some landed interests.

H. P. Leavenworth, an Indiana boy, Supt. of schools of Onawa, Iowa, last season, has abandoned school teaching for journalism.

J. K. Walts, Supt. of the Marion schools, has removed to his new home. He was offered the presidency of Moore's Hill College, but declined.

J. D. White, a leading Decatur county teacher, who for the last year has been in the newspaper business, will be principal at Pendleton next year.

H. C. Fellow, a graduate of Earlham College, formerly a teacher in this state, has been elected principal of Friends' Academy at Tonganoxie, Kan.

A. J. Dipboy, late Supt. of Miami county, has been elected Supt. of the schools at Anderson, *vice* R. I. Hamilton, resigned. He has a good record.

W. A. Mowry, editor of *Education*, is writing a book on Civil Government, which will be published by Silver, Rogers & Co., about September 1.

S. E. Harwood, who has been Supt. at Spencer for several years past, goes to Attica, where he receives \$1050, an increase on what Spencer pays.

J. W. Runcie, Supt. of the Ft. Branch schools, has made such a success of his annual spring normals, that he has decided to establish a permanent normal school at Princeton, which will be opened next spring, Princeton furnishing the building.

T. C. Mendenhall, President of Rose Polytechnic Institute, Terre Haute, has now been in the state a year, and has become acclimated, or Hoosierized.

J. F. Warfel has been elected principal of the Ladoga schools, to take the place of C. M. Lemon, resigned, to give his entire time to his paper and his book store.

T. W. Thomson was elected to fill the vacancy in the high school of Mt. Vernon, occasioned by O. L. Sewell's election to the county superintendency of Posey.

S. E. Miller has been elected for the *twenty-first* time, Supt. of the Michigan City schools. That puts him next to Merrill of La Fayette, the oldest Supt. in the state.

George A. Powles, for the past five years the efficient Supt. of the Mishawaka high school, has been elected superintendent at Argos. He will have seven assistant teachers.

Robt. J. Aley, Prin. of the Spencer high school, has been recalled to his *alma mater*, the State University, to take the place of assistant in the department of mathematics.

Prof. J. A. Woodburn, of the State University, having spent a year at "Johns Hopkins" studying his specialties, has returned and will take his place and work the coming year.

Miss Leola Vater, who has been a teacher in the Indianapolis schools for six or seven years, was recently married to Mr. Ediwiss, a worthy gentleman. The Journal wishes her joy.

S. S. Parr, of De Pauw Normal, sailed for Europe July 23, by the steamer Etruria. He expects to be gone six months, and will devote his time chiefly to the study of schools and educational problems.

W. W. Parsons, President of the State Normal, acquitted himself with credit in the exercises before the Normal School Section of the National Association. Mr. Parsons is in the habit of doing things *well*.

Prof. D. W. Dennis, of Earlham College, has had conferred upon him the degree Ph. D. by Syracuse University. Prof. Dennis will spend a part of his summer in investigating the geological structure about Pike's Peak.

Miss Lucy M. Salmon, teacher of history in the State Normal, has accepted a similar position in Vassar College. Mr. Elwood W. Kemp, already in the Normal School faculty, will fill Miss Salmon's place, and will do it well.

W. B. Owen, of Tuscola, Ill., has been elected Supt. of the Edinburg schools, to succeed J. C. Eagle, resigned. Mr. Owen comes with the best of recommendations, and the Journal bids him a hearty welcome to the Hoosier State.

Eli F. Brown, well known to many Indiana teachers, who for the past two years has had the superintendency of the schools at Paducah, Ky., is in poor health and has given up his work for the present. He is succeeded by Arthur H. Beals, formerly an Indiana man.

E. E. Smith has given up teaching for a year, having resigned the position accepted in Garfield University, and will travel in the West Central States for that excellent publishing house of Boston, D. C. Heath & Co. His headquarters will be at Chicago—185 Wabash Avenue.

Mrs. Emma Mont. McRae resigns the principalship of the high school at Marion, to which she had been re-elected at an advanced salary, to accept the position of Lady Principal and Professor of English Literature in Purdue University. Purdue has made a valuable acquisition to its faculty.

Wm. M. Croan, formerly one of Indiana's most enterprising county superintendents, has for the last three years been at the head of a normal school located at Shenandoah, Iowa. According to reports his success has been remarkable. During the past year he enrolled nearly 1200 different students.

R. I. Hamilton has resigned at Anderson to accept the superintendency at Huntington. Mr. Hamilton has been a leading spirit in Madison county for 15 years—3 years as principal of the Anderson high school, 6 years as county superintendent, and 6 years as superintendent of the Anderson schools—always successful.

W. N. Hailman, Supt. of the La Porte schools, is a prominent man in the national educational meetings. At Chicago he read a paper before the National Council, which was much eulogized; he was Prest. of the Kindergarten Section and made an opening address, and he had an exercise before the general association. He is a credit to Indiana.

W. W. Byers, the well-known principal of the Terre Haute high school, while in attendance at the National Association at Chicago, met with a serious accident. In attempting to cross a street in a great throng he was knocked down by a coal cart containing two tons of coal and a wheel ran against him. The driver stopped his team just in the nick of time and saved his life. He was badly hurt but escaped permanent injury.

Mrs. Eudora Hailman will, in September, open again her school for training kindergarten teachers. She is a thorough kindergarten herself, has much more than ordinary ability, is full of enthusiasm, even to overflowing, and has unusual facilities for giving teachers not only the theory but practice, and extended observation. No other schools in the state employ kindergarten methods to so great an extent as do the La Porte schools.

J. W. Caldwell, who has been doing excellent work at Huntington for several years past as superintendent, has lost his place. He was re-elected by the old board but had no *written* contract. The new board set aside the action of the old board and elected another person to the place. Mr. Caldwell has brought suit on his contract, and so the courts will have to decide the disputed points. This seems to be another case of pure and unadulterated "*politics*."

J. M. Bloss, who leaves Muncie to take the superintendency of the Topeka, Kan., schools, has made many warm friends not only among the school people but among the citizens with whom he has associated for the past five years. As a testimonial, at the close of the schools, a number of the leading citizens made him a present of an elegant gold watch, to which the teachers added an appropriate chain. Mr. Bloss has a habit of making warm friends wherever he is well known.

Miss Mary Nicholson, principal of the Indianapolis training school, was last year elected a member of the National Council of Education, to fill a vacancy. This year she was re-elected for the full term of six years. It is quite an honor to belong to this honorable body, and Miss Nicholson is the fourth lady that has ever been admitted. She read a paper before the Normal School Section which was highly spoken of, and was made chairman of the executive committee of that section for the coming year.

BOOK TABLE.

THE ST. NICHOLAS as a youth's magazine has no superior if it has an equal. Its matter is excellent, its illustrations are beyond criticism, and altogether it is "a thing of beauty and a joy for ever" to boys and girls.

THE FRANKFORT CRESCENT has for many years been one of the leading county papers of the state. Its editor and proprietor, E. H. Staley, was an old teacher. He recently thought to take a rest, but the condition of the paper at the end of six months, demanded his return to the helm.

THE CENTURY continues to maintain its high standard and is not excelled by any illustrated monthly in the world, and no other of its class has so large a circulation. The "War Series" continues to be as attractive as ever. The ablest writers of the country contribute to its pages, so no one can make a mistake in selecting the *Century* as a first-class literary magazine.

BOOKS AND READING FOR PUPILS: *By J. E. Wiley.*

This is a little pamphlet containing a list of books carefully selected and graded, suitable for pupils. They are classified with reference to the age of the reader. The name of the publisher and the price are given, which will prove a great convenience. The selections are good—excellent. While many may wish to add to the list, no one would willingly take any book away from it. Persons wishing to buy books

for children will be thankful to Mr. Wiley for this little book. Price, 25 cents. Address the author at Franklin, Ind.

THE ESSENTIALS OF FRENCH GRAMMAR FOR ENGLISH SPEAKING STUDENTS. By James H. Worman, Ph. D., and A. D. Rovgament, B. A. Published by A. S. Barnes & Co., New York and Chicago. Cyrus Smith, Indianapolis, Agt. for Indiana.

The authors claim as the salient features of this book that the principles are revealed in carefully chosen examples, reviews are kept up as new principles are introduced, the exercises teach essential knowledge, and the question form is given to examples. The effort has been to make a *Conversational Grammar* of the French language for English students.

PRINCIPLES OF EDUCATION PRACTICALLY APPLIED: By J. M. Greenwood. New York: D. Appleton & Co. Charles E. Lane, Chicago, Western Agent.

The author of this little volume is the successful Supt. of the Kansas City schools. He assumes that education is a science, and that teachers can understand the principles underlying it. He takes it for granted that teachers in their daily work can apply these principles in their treatment of the children under their control. The book, like the author, is straightforward, plain, pointed, and emphatic. It is certainly a good book for teachers—especially young teachers.

STORIES FOR OPENING EXERCISES IN SCHOOLS: Compiled and published by Geo. F. Bass, Indianapolis.

This book is now out, and is certainly what many teachers will be glad to get. Most teachers like to have quotations and stories in connection with their opening exercises, and good ones are not easy to find in sufficient quantities. Mr. Bass has had large experience in this work and is a person of good discernment and good taste, as is shown in his selection of quotations and stories. The book is just such a one as the writer would have been delighted to find when he was in the school-room. The book is neatly bound in cloth, contains about two hundred and fifty selections, and sells for \$1.

THE HOUSE I LIVE IN: Cincinnati: Van Antwerp, Bragg & Co.

This is an elementary physiology for children in the public schools, with special reference to the nature of alcoholic drinks and narcotics, and their effects on the human system. It is well written and tells in a simple way how to live. All the vital questions of eating, drinking, bathing, exercising, sleeping, are treated in a simple manner and illustrated by examples so as to bring everything within the understanding of children. The injurious effects of tobacco and the accursed effects of alcoholic drinks are set forth in their true light. Such a book in the hands of the boys and girls will prove a most effective antidote for intemperance in the near future.

ROSSINI'S METHOD IN EDUCATION: Translated by Mrs. William Grey. Boston: D. C. Heath & Co.

Rossini has been called the Italian Froebel. He was born in 1807 and died in 1855. He undertook about the close of 1839 to write a work on Pedagogy. He was unable to complete it. He accomplished only what he chose to call "The Ruling Principle of Method Applied to Education." This about covers the kindergarten age. While the book may seem to many more psychological than practical, there are

many suggestions in it that are of great value to the teacher who thinks. Such a teacher will study this book with pleasure as well as profit. Rossini has peculiar views on language. Probably the most valuable part of the whole book is his exposition of the gradual development of the moral sentiments. He holds that it is the nature of the child to love and respect every intelligent being he comes to know.

This book is so much like Fröbel's Education of Man, that whoever reads one should read the other.

BUSINESS NOTICES.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

Mrs. Hallman's Training Class for Kindergartners, at La Porte, Ind., will open its Eleventh Annual Session on Wednesday, September 7th.

TEACHERS may devote their summer vacation pleasantly and *very profitably* to the organization of Circulating Libraries in towns and country. A good Library is a public enterprise, and our Agents are heartily welcomed everywhere. Send for Catalogue.

8-11

G. W. WALTERS,

P. O. Box 1432, Fort Wayne, Ind.

Just published by A. S. Barnes & Co.—Lights of Two Centuries; Primary Methods, by W. N. Hailman, Revised Edition; Steele's Chemistry and Zoology, Revised Edition; Martin's Civil Government; Short Studies in English, Parts I and II. Cyrus Smith, Agent, Indianapolis, Ind.

An Excursion to Niagara Falls will be run August 8th by the I. B. & W. Ry. The price of a round-trip ticket is only \$5 from Indianapolis. This is a grand opportunity for teachers and their friends who have never seen this great natural wonder. The same Road will run a second Excursion at the same price starting August 23d. For particulars address H. M. Bronson, Indianapolis, Ind.

DEPAUW TRAINING SCHOOL.—De Pauw Normal School has secured the services of Miss Rose B. Blair, of Waterloo, Ind., to conduct the Training School to be opened at the beginning of the Fall Term. Miss Blair is highly recommended by Mr. and Mrs. Hailman, under whose training she was partly prepared. She is well versed in the latest modes of primary work, and will be able to show the students of the Normal School the principles and practice of those grades.

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ills. 1-1f.

CONSUMPTION CURED.—An old physician retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma and all throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y. 11-9f

Teachers Wanted!

TEACHERS WANTED—SEPTEMBER SESSION.

10 Presidents of Colleges. 6 Superintendents. 20 Principals for High Schools. A large number of Assistants in Schools and Colleges. Address, with stamp,

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P. O. Box 410 Birmingham, Ala.

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No. 9.

GEOGRAPHICAL INSTRUCTION IN GERMANY.

HIGHER SCHOOLS.

[Translated from the German by Howard Sandison.]

THE higher schools in Prussia are those which receive the pupils in the VI class, as a rule not before the completion of the ninth year of life, and confer upon them, along with the testimonial of maturity, at least the scientific qualification for the one-year voluntary military service.

These same divide into four groups:—

1. The Gymnasia and Progymnasia. [The Gymnasia without their higher classes.]
2. The Real Gymnasia and Real Progymnasia.
3. The Upper Real Schools, Real Schools, and Higher Citizens' Schools.
4. The Agricultural Schools.

The first three have received, March 31, 1882, new plans of instruction, and May 27, 1882, a new regulation of the final examinations. Out of these regulations the following come here for consideration:

I. GYMNASIEN AND PROGYMNASIEN.

The plan of instruction of the Gymnasia is the following:

	VI	V	IV	III B	III A	II B	II A	I B	I A
Religion.	3	2	2	2	2	2	2	2	2
German	3	2	2	2	2	2	2	3	3
Latin	9	9	9	9	9	8	8	8	8
Greek.	—	—	—	7	7	7	7	6	6

French.	—	4	5	2	2	2	2	2	2
History and Geog.	3	3	4	3	3	3	3	3	3
Mathematics. . .	4	4	4	3	3	4	4	4	4
Natural History. .	2	2	2	2	2	—	—	—	—
Physics	—	—	—	—	—	2	2	2	2
Writing	2	2	—	—	—	—	—	—	—
Drawing.	2	2	2	—	—	—	—	—	—
Singing	2	2	2	2	2	2	2	2	2
Gymnastics. . . .	2	2	2	2	2	2	2	2	2
		3 ²	34	34	34	34	34	34	34

Subjects of Instruction: *History*—A knowledge of the epoch-making events of general history and of the characters most prominent therein, through their importance, especially of Grecian, Roman, and German history. Chronological certainty, in a cautiously limited degree of the range of the requirements, and an acquaintance with the region of the historical events.

Geography. The theory of mathematical geography. Knowledge of the most important relations of the surface of the earth and of the present political divisions; a penetrating knowledge of Middle Europe in both relations.

To that end the following explanations are given:

The historical instruction of the Gymnasias is to proceed upon a careful conformity to the ordinance, especially in two respects:

The first is to consider that they are German pupils to whom the instruction is imparted. Therefrom it follows that the ancient history has to direct itself essentially to those nations which have exercised the most decided and the most immediate influence upon the government and culture of the fatherland, the same peoples, the history of whom, moreover, is brought nearer to the pupils through their Latin and Greek reading; further, that for the mediæval and modern period, the history of the fatherland—of Germany and of Prussia—form the central point, and that the history of other civilized nations is introduced only in such a degree as is necessary to the understanding of the history of the native land, and to the formation of a correct conception concerning the prominent influence at stated times of separate states upon the general course of history.

Secondly, the conception of history is conditioned through the measure of political interest and understanding. In this respect, to wish to mature a precocity would be a grievous wrong. The historical instruction of the gymnasias has fulfilled its purpose when it has nourished in the pupils a high esteem for the moral greatness of individual men or of whole peoples; [when] it has called forth the consciousness of how much is yet wanting to

them for a full insight, and has given to them the qualification to read with understanding the most important classical historical works. The chronological knowledge indispensable to guard the remembering of the facts from entanglement, is to be brought to a certainty only through an adherence to the essentials.

(It is worth remembering that in every institution a definitely arranged catalogue of the required dates be agreed upon.)

Concerning this it is to be absolutely observed that with the memory of every historical event, the geographical knowledge of its locality is to be firmly united.

In the classes vi, v, and iv, two hours of instruction weekly, fall independently to the geographical instruction, which need not be required from the teacher of history. (So far as use is made of the permissibility of this division, is the historical instruction to be assigned to a teacher entrusted with another subject in the same class; really most appropriately to the teacher of German.) In iii, one hour weekly belongs to this instruction. From ii on the instruction in history is to be constantly used for the strengthening of the acquired geographical knowledge, and in addition, reviews are to be arranged from time to time, over such parts of the geographical knowledge as are not touched by the historical instruction.

The third hour of instruction in vi and v is to be devoted to biographical narratives. In iv the historical instruction begins, and is carried forward in two courses—a lower (iv, iii) and a higher (ii, i).

The geographical instruction possesses to a greater degree than the historical, the danger that through an excess of names and numbers, the memory of the pupils may be overburdened, and because of that, the strength of the power to recall and retain endangered.

Almost every special subject brings, in its way, an extension of geographical knowledge, and warrants, at all events, an interest in the occurrences of the present. But it is indispensable that the school instruction has formed a firm body of knowledge to which the supplementary things may attach themselves.

The exercises of the pupils in the drawing of geographical sketches will best aid to fix strongly the form, when the teacher is able to indicate by his drawing upon the board the method and scale for the same. By the fundamental principles of math-

ematical geography received within the range of geographical instruction, only those elements essential to the comprehension of maps, and of the surface relations of the earth are meant. A more detailed consideration must be reserved for the highest grade until after the study, in solid measure, of the properties of the sphere, has preceded; for to the work in physics belongs "a knowledge of the most important principles of mathematical geography."

The explanations to note in addition, in the case of mathematics:—

"It is not excluded, that, under proper circumstances, so much of spherical trigonometry is received as serves for an understanding of the fundamental ideas of mathematical geography;" and in the case of physics: "In the highest class, in connection with mechanics, optics, and mathematical geography, the mathematical basis of the laws is joined, in so far as the knowledge of the pupils allows."

Under the heading—*Regulation for conferring the testimonial of maturity*—the order of final examinations contains the following requirements: "In history and geography, the pupil must know the epoch-making events of the world's history, especially of Grecian, Roman, and German, as well as of Prussian history, in the relation of their causes and effects; and he must be quite familiar with the time and place of the events. He must possess a satisfactory knowledge of the fundamental principles of mathematical geography, of the most important physical relations and of the political divisions of the earth's surface, along with an especial consideration of Middle Europe.

And under the regulations concerning the oral test: "The historical examination has for its subject, especially, the history of Greece, Rome, Germany, and Prussia. Some geographical questions are presented to each pupil, regardless of those in the historical test, bringing into consideration, perchance, the relations of geography."

Progymnasia are gymnasia to which the highest class is wanting.

Their plan of instruction is identical with that of gymnasia in

the corresponding classes; their work constitutes the preparation for the highest class of a gymnasium.

The foregoing regulations for the final examination of gymnasia have application, in a corresponding sense, to the final examinations of the progymnasia.

"EDUCATION."

I wish to call attention to the much abused term "educate." The derivation of this word from *educere* is so common that it is no longer news, and is received without a question. While this is in a sense correct, it lacks much of being exact.

Educere is the primitive from which the Latins formed the word *educare*, strictly, perhaps, a frequentative, and meaning "to bring up, to instruct, to nourish," etc., and applying to both mental and physical development; while the ordinarily accepted meaning of *educere* is simply "to lead or bring forth, to draw out." Now if we so reverence the Latin language as to consider a single word a sufficient basis on which to build so extended a theory as this one of "drawing out," let us also treat it honestly, and at the same time show so much respect for ancient and modern *educators* as not to make of them mere *educators*.

That this is what is attempted appears from a moment's observation of the supines of the two words: of *educere* it is *eductum*, from which we may have "educt," etc., but not "educate"; the supine of *educare* is *educatum*, from which we easily derive our word.

If the Romans needed *educare*, having already *educere*, it certainly should be humiliating to confess that we have so retrograded as not to require the more precise and expressive word. Not, perhaps, less education, but more education.

L. D. C.

COOK CO. (COL. PARKER'S) NORMAL SCHOOL.

VICTOR C. ALDERSON.

Six miles south of Chicago, overlooking the beautiful suburb of Englewood, and almost in sight of Lake Michigan, stands

the Cook County Normal School, now fast becoming famous as the seat of operation for Col. Parker's idealistic form of education. It is Monday morning. Children are at play in all parts of the twenty-acre grounds with hoops, ball and bat, croquet and tennis. A dense and noisy crowd on the front steps is busily engaged with jack-straws. After pushing our way through their midst, perhaps to their inconvenience but not to their serious harm, we reach the main hallway. Here are stray groups of children talking, laughing, bustling to and fro, apparently regardless of law and order. No monitor checks their seeming waywardness nor does quietness prevail, but rush, hurry, and stampede, pervade the school. Individuality reigns supreme, and the query rises if this be really our long heard-of school, if it be truly a schoolday or only a holiday, when restraint is removed and all "go as they please." Such is the first impression. Mayhap it will not be lasting—Let us see. The din seems on the increase; each additional group arriving adds zest to the already motley throng, till at the time for opening six hundred students—from the four-year-old kindergartner to the experienced teacher far beyond her teens—are mixed in one heterogeneous crowd, scattered at will over the building at first sight devoid of order, discipline, or purpose.

At the hour of beginning a huge hand-bell vigorously rung by a teacher at the open door, gives the signal for all to rush pell mell, helter skelter, into the building, making a scene to remind one of the days of the "Hoosier School Master." In this motley crowd are the little kindergartners, the primary, grammar, and high school scholars, graded in years at least much like any other school, and the professional training class. We will follow this last and characteristic division to their room.

In a large, high studded class-room, furnished with double rows of comfortable desks, sit the two divisions of the training class—169 in number. The wood work is dark in color; long thin drapings hang before the windows to soften the strong morning sunlight; the black-boards are decorated with sprays of flowers and leaves; putty maps—that striking novelty of this school hereafter to be described—lean against the walls; pictures of

Mayo, Eaton, and Philbrick, and busts of Socrates, Fröbel and Pestalozzi, looking down upon them remind them of these famous educators, and they in return with reverence for their teacher class their own Col. Parker in that same illustrious group. But here he comes himself. We see him through the long entry. He is large, nearly rotund, walks with a heavy, determined step, has "firmness large" on every feature of his face, while his smooth glistening pate seems to reflect intellectual as well as sunlit radiance. He enters quietly and takes his comfortable, well-fitting arm-chair. Silence reigns. Softly a young lady rises in her place and gives a quotation as offering for the morning exercises; another, and another follows, occasionally interrupted by reflections of the Colonel, which are generally received with a submissive "*ipse dixit*."

When these exercises are over the second division retires and the daily morning psychological stimulant is administered to the first division. The services of a stenographer would be required to even faintly picture the scene which follows. The opening salutatory of the Colonel; the silent acquiescence; the sudden illumination of intellect on the part of some pupil who rises to his feet and expounds; the ready retort; the strong, succinct argument; the evidence of clear thinking; the sharp discrimination; the willingness to listen, to ponder, and to express; all this, too, without formal lecture or even text-book, but only by the contact of mind with mind, by introspection, elucidation, discussion, and by a most skilful use of the art of teaching, does Col. Parker make his class real thinkers. They seem to know little of psychological books and less of philosophical schools, and if a visitor is so unfortunate as to argue with any one of them, he is charmed with a "state of consciousness," entranced by a "glittering concept," and stabbed with an "elementary idea." After an hour or more of deep thinking they are dismissed with a "You may go, children," and the class is excused.

The method by which they apply any pedagogical or psychological inspiration they may have is worthy of a passing note. For one hour each day the members of the training class are allowed to practice upon the pupils of the school. Each clas

however simple to her it may be. Soon, if capable, she is allowed to give an occasional lesson to her group and then to the whole section, but at each step of her advance she is under the watchful eyes of her more experienced class-mates, the group teacher and section leader, the regular room teacher, the professional critic teacher, and Col. Parker. Criticism is common, but in all cases is private and friendly—aiming rather to eradicate glaring faults than to magnify passing errors. After two years of steady growth in planning, studying for, and giving lessons, the teacher is graduated. The main part of the work is upon principles and their immediate application, rather than upon “grinding facts” and “swallowing theories.”

The scene during the hour of practice teaching is unique. The Assembly Hall, with scattered groups of children sitting on long settees, the teacher standing before them, reminds us of a Sunday-school in active session. Around every table that can be mustered into service and space found for it in some corner of the hallway, is seated a group of children—theoretically and practically, too, at times, practiced upon. The entire school is broken into fragments and scattered about.

One day at the school gives a visitor the impression of collective disorder, but much individual work, and an unceasing rush and tear. The din seems to begin faintly at 8 A. M., when the early workers arrive, and increases in intensity and force till it reaches a maximum in the afternoon, when it diminishes gradually till the last straggler is hustled out at 6 P. M. by the nervous janitor. Verily, 'tis difficult to tell, oftentimes, whether school has begun or ended—so imperceptible is the change.

The second day's impression and the famous manual training department I will describe in my next.

THE PAUPER CHILDREN.

EDITOR SCHOOL JOURNAL: Will you kindly allow me through your widely circulated journal to call the attention of the teachers of Indiana to the situation of the *pauper children* of the state. I would like to ask them to contribute, to any educational or county

papers that will accept the articles, such statements of facts in regard to these children—their school privileges, their average ability and advancement as compared with other pupils, and the industrial and moral training which they receive, as will help to impress upon the public, and especially the tax payers, the *truth*, that the most economic as well as the most humane and christian treatment can be given these *wards* of the state in good *homes*, where, with good influences around them, a wise and kind matron in charge, they will be so loved, governed, and taught; so trained in habits of industry, honesty, and truthfulness; so inspired with a love of independence, and a dislike for the state of pauperism, that they will grow up to become self-supporting, useful citizens.

Let it be seen that the county house is by no means the *cheapest* place to put these little ones, setting aside even, any sentiments of humanity that the influence of the inmates, at least many of them, would tend to prepare another generation to be paupers, to perpetuate the race. If these children can be adopted by worthy people, and brought up with right principles and habits, it is well; but if not, and few people go to the poor house for a child to adopt, the sooner all such are gathered into *families* by themselves, and a suitable matron placed in charge, making *real* homes for them, where they will be *helped* to *help themselves* and each other, the better; not alone for them, but for all who have to pay the cost of pauperism and crime.

It is shortsighted, it is cruel, aye, *criminal* to leave these innocent children to the deleterious influence of the thriftless, the idle, the vicious, the insane; or, to put them to board with the lowest bidder, regardless of the moral or industrial training they are to receive. There will be enough such innocents laid upon the altar of vice by their own parents, where the county commissioners can not legally interfere.

Inherited tendencies will, no doubt, to a great extent color their lives; but with proper care, and love, and teaching, thousands may be saved to become useful citizens, who will, otherwise, grow up to swell the criminal class, to live miserable, useless lives, and cost the state much more in the end than would good homes for all at first.

A few years ago a copy of the law, then recently enacted, relating to this class of dependents, with the reasons for the enactment, and a sketch of the devoted labors of that noble woman Miss Fossell, of Spiceland, was kindly sent me by the pastor of one of the churches in Indianapolis. It seemed to measurably meet a want which I had long felt to be imperative, and I hoped that its provision would speedily be carried into effect throughout the state; but I soon found that in three counties, where I made inquiries, it would not be done. Roads, bridges, public buildings, some of them costly and very creditable to the county, required all the money. "The county was in debt." "There were not many children." As there were not *many* they must wait. No child of yours or mine, dear teacher, you know, was included in the little band of waifs. No sister of yours or mine had passed to the unseen and left a little girl or boy to tender mercies of the rich or poor county. I returned to my own state again last year to teach, and found in two counties (the third I did not visit) that the children are still waiting; and the query naturally arises, In how many other counties are they likewise waiting? And in those where homes have been established in accordance with the law, what has been the result? However, I found more interest in the subject among public officers and prominent influential persons, and I have hope for our county.

We, now and then, are accused, and I am sorry to say sometimes justly, of teaching only for the salary, of using the occupation only as a stepping-stone to some more popular or lucrative profession; but I believe there is no class of people who as a whole, feel more interest in the well-being of children and youth, and none who are willing to labor more freely for their good. Hence I do not hesitate to present this request to them.

This work can be done, and will be, so soon as the attention of the public is fully directed to the subject. Here is work for teachers generally. Individually they have influence, collectively they are a power, and I pray that that influence, that power, be used for the cause of the poor, the helpless, the suffering little ones.

CARROLL.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

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FURTHER SUGGESTIONS ON NUMBER.

VARIETY OF OBJECTS. 1. In order to clearly and rapidly give the child power over the numbers there must be at hand quite a variety of objects.

For the work in the measures or tables, mentioned in the previous article, the teacher needs a pair of scales, a set of weights, a set of measures, (tin, and also wooden or pasteboard), inch, foot, and yard measures, etc. They can be obtained at but little expense. In many schools the trustees will furnish them; and some of them may be made by the teacher without special difficulty.

In addition to the objects mentioned, the teacher should be provided with tin and paper coins; triangles, circles, squares; the various solids, as sphere, cube, cylinder, cone, etc.; spools, corn, shells, pebbles, etc.

This wide range of objects will add interest to the number work by connecting it more closely with the experience of the children. And it will give them greater power in number itself, because it will enable them to see the idea in so many varying relations.

It is to be remembered that objects are only means, and not ends; and that when by means of them the pupils have perceived the idea in many diverse objects, and have become able to think of it as an idea in itself (i. e., have abstracted it), the objects then are a hindrance. There is not, however, so much danger in continuing the use of objects too long, as in dispensing with them too early. The pupils should be required to illustrate each relation and each "story" with all the various objects until it is very clear that the relations are his property.

2. ARRANGEMENT OF THE CLASS. In this early work in number it is convenient in giving directions, and of advantage to the pupils in handling the objects, as they illustrate the rela-

tions and "stories" to have the class arranged around a low table. The table should be about three feet wide and some eight or nine feet long. It can be procured at very little expense if the authorities do not furnish it. All of these preparations for the work repay the extra efforts to obtain them, however, because of the greater interest, clearness, and convenience that they insure.

3. THE PUPIL'S KNOWLEDGE OF NUMBER WHEN ENTERING SCHOOL. If teaching means calling out the dormant faculties, and giving the mind power to think, then it is evident that mind is the teacher's subject. Hence, in beginning the work in any branch of study, the first thought of the teacher must be the condition of the pupil's mind in regard to that branch. The whole secret of making a proper beginning in a branch of study lies in finding the exact condition of the pupil's mind in regard to it. This is too much neglected. The teacher in starting the work begins without giving any special consideration to anything except the branch to be taught. The first step in number work is to determine the condition of the child's mind as to number. There are four steps in this:—

a. The first is to have the pupils match with objects the number of objects that you show; as, (showing *two* objects), "With your cubes, corn, etc., show me as many as I have." This with variations should be repeated until it is clear whether each pupil can do this. This requires the child to show the concrete thing in a certain number upon the presentation of that number with objects.

b. The second step is one in which the child is required to give the name of the number when the number of objects is shown; as, the teacher, showing *two* objects asks, (each child answering apart from the others, or so that only the teacher hears), "How many things have I?" In the first step the teacher decides whether the pupil has associated the number *two* with its appearance when given concretely. In the second she sees whether the pupil has associated the number with its oral term. Often, the teacher thinks that if the pupil can count to four, five or six he knows the numbers to that extent; but this does not necessarily follow.

c. The third step is that in which the pupil is to be tested as to whether he can accurately and quickly give *two* objects when the teacher gives the oral term. These three tests carefully applied to each number will show whether he has the idea of it *as a whole*.

d. The fourth step in determining the child's knowledge of a number, is to test him as to the relations in the number and as to its application; as, "How many cents are in a two cent piece?" "How many are a yoke of oxen?" "One cube and one cube are how many cubes?" "If you have two apples and give one of them away how many will you have left?" "One-half of two circles is how many circles?" etc.

Apply these tests systematically to the numbers and both the numbers and that phase of the numbers which the child is master of will be shown.

ASSOCIATION IN SCHOOL WORK.

"It is association which makes the unity of our mental existence, by establishing a natural bond between all the various parts of which it is constituted; and it is to association that we must look for the formation of habits, judgment, character, and morality of children. Association presents us with an easy means of exercising the memory methodically, of verifying its acquisitions and its aptitudes, of facilitating its play, and rectifying its errors, by the facility which it affords a child's mind—especially when influenced by an adult will—of ascending or of descending the chain of its ideas and sentiments.

Do what we will, however, we shall never arrive at knowing and being able to guide more than a very limited number of the associations which work in a child's mind. The important matter is to know that we can discover and establish a great many essential ones, those which are the most apparent and habitual, and that we can thus to a certain extent move according to our own will, the secret springs of the young character.

We must not give in to Fénelon's opinion, that is enough to awaken the curiosity of a child and to heap up in his memory a mass of good materials, which will combine of themselves in due

time, and which the brain when more highly developed will arrange into systematic groups; we should endeavor so far as possible to control the first impressions which sink unconsciously into a child's mind, but still more careful should we be in the selection of those later ones which we try to inculcate on him, and of the links which we wish to establish between such and such perceptions, sentiments, or actions; for the older a child grows the less must we count on the innate tendency of just ideas, suitable sentiments, and useful impulses to combine themselves in logical and durable associations.

To a child's mind every combination is logical and moral from the mere fact of its existing. From infancy, therefore, we must keep careful guard over the formation of those associations over which we have any hold. Why is it that domestic animals, so far as they have escaped man's training and follow the natural impulses of their organization, combined with the direct action of external objects,—appear to us often to show proofs of a surer and quicker judgment in the things which are useful for them to know, than most human beings would in like circumstances? It is because the instinct in each species, and their variable development in each individual, are subject less to imitation and education than to personal experience, and to the latter less than to hereditary experience; and by experience we mean associations firmly combined and in a very limited space. Their logic is more limited than ours, and is circumscribed within a small sphere of relations, but in this sphere it moves easily; it is founded on the natural relations of things, on associations truly experimental.

As much may be said, in many respects, of savages. It is not only by the acuteness and special adaptations of their senses that they are superior to us, but by the judgments, limited it is true, but founded on practical experience, which they bring to bear on the impressions of their senses. Not only are some of their senses,—sight and hearing for instance,—of much wider scope than ours, but their daily life places them in circumstances fitted for the exercise and development of their sensorial judgments.

Concerning the Arawakes, Hillhouse says: "Where a Euro

pean can discover no indication whatever, an Indian will point out the footsteps of any number of negroes, and will state the precise day on which they have passed; and if on the same day, he will state the hour." . . . "Along with this acuteness of perception there naturally goes a high degree of skill in those simple actions depending on the immediate guidance of perception."—*H. Spencer*. . . . Such is the result of frequent or minute observation of a limited number of objects. We must, therefore, be careful to select experiences for children who can not choose for themselves, and this not only with a view of developing little by little the sensorial faculties of our species till they equal those of savages and certain animals, but also of developing, side by side with the perceptions, the faculty of judging and acting rightly. To give a child very little to observe at a time, but to make it observe that little well and rightly, is the true way of forming and storing its mind."—*The First Three Years of Childhood*.

REASONING WITH CHILDREN.

IN Locke on Education, page 20, is said: "It will perhaps be wondered, that I mention *reasoning* with children; and yet I can not but think that the true way of dealing with them. They understand it as early as they do language; and if I mis-observe not, they love to be treated as rational creatures, sooner than is imagined. It is a pride that should be cherished in them, and as much as can be, made the greatest instrument to turn them by. But when I talk of *reasoning*, I do not intend any other but such as is suited to the child's capacity and apprehension. Nobody can think a boy of three or seven years old should be argued with as a grown man. Long discourses, and philosophical reasonings, at least, amaze and confound, but do not instruct children. When I say, therefore, that they must be *treated as rational creatures*, I mean that you should make them sensible by the mildness of your carriage, and the composure even in your correction of them, that you do what is reasonable in you, and useful and necessary for them; and that it is not out of *caprichio*, passion, or fancy, that you command or forbid them anything.

This they are capable of understanding; and there is no virtue they should be excited to, nor fault they should be kept from, which I do not think they may be convinced of; but it must be by such reasons as their age and understanding are capable of, and those proposed always *in very few and plain words*.

The foundations on which several duties are built, and the fountains of right and wrong from which they spring, are not perhaps easily to be let into the minds of grown men, not used to abstract their thought from commonly received opinions. Much less are children capable of reasoning from remote principles. They can not conceive the force of long deductions. The reasons that move them must be obvious and level to their thoughts, and such as may (if I may say so) be felt and touched. But yet, if their age, temper, and inclination be considered, there will never want such motives as may be sufficient to convince them. If there be no other more particular, yet these will always be intelligible, and of force to deter them from any fault fit to be taken notice of in them, viz: that it will be a discredit and a disgrace to them, and displease you.

But of all ways whereby children are to be instructed and their manners formed, the plainest, easiest, and most efficacious, is, to set before their eyes the examples of those things you would have them do, or avoid; which, when they are pointed out to them, in the practice of persons within their knowledge, with some reflections upon their beauty or unbecomingness, are of more force to draw or deter their imitation, than any discourses which can be made to them. Virtues and vices can by no words be so plainly set before their understandings as the actions of other men will show them, when you direct their observation, and bid them view this or that good or bad quality in their practice. And the beauty or uncomeliness of many things, in good or ill breeding, will be better learnt, and make deeper impressions on them, in the *examples* of others, than from any rules or instructions that can be given about them.

This is a method to be used, not only whilst they are young, but to be continued even as long as they shall be under another's tuition or conduct; nay, I know not whether it be not the best

way to be used by a father, as long as he shall think fit, on any occasion, to reform anything he wishes mended in his son; nothing sinking so gently or so deep into men's minds as *example*. And what ill they either overlook or indulge in themselves, they can but dislike and be ashamed of, when it is set before them in another."

THE IDEA IN PRELIMINARY GEOGRAPHY WORK.

In this work, statements, as such, committed to memory; the "pouring in" process, and the learning of facts for the sake of mere knowledge, are, as elsewhere, to be avoided. Everything that can be, is to be made palpably evident by illustration, analogy, observation, and experiment. For example, in treating of the different degrees of heat in the atmosphere due to the direct and reflected rays of the sun, refer to the stove, the wall, and the heating of the intervening space.

In teaching that heated air rises, and that this rising causes lateral currents, call attention to what may be observed at a register, a fire place, or over a slab of heated iron.

The expansion of heated air may be observed in the popping of corn, baking of apples, etc.

The difference in the rapidity with which earth and water receive and give off heat, may be shown by observing vessels filled with each, and exposed to the sun at noon, and again some time after sunset.

The aim is to be to awaken an intelligent appreciation of what is already known in part by rote, or daily seen by eyes that see not, or daily done but not understood, and to connect it by its innumerable links with the unknown. The materials presented are to be used as an exercise ground for thought.

To a degree it is dealing with the latent known, and the answers are, in part, theoretically in the pupils' minds already, and the object is to awaken thought; to cause them to sift and rearrange their ideas; to implant new desires and new capacities for satisfying desires; to give, not so much knowledge, as power to learn and to observe.

Unless this habit of intelligent observation is implanted, the horizon will be close about the pupil and he will be as Schopenhauer says of one without a knowledge of Latin—"As a man walking in a beautiful region in a fog."

The pupils are to consider the questions carefully, which is a great point gained.

They are to debate the questions thoughtfully, which is a greater point gained.

They are to answer the questions with thought, which is the greatest gain.

Pupils who are merely instructed and who are assisted unduly at almost every step, can not answer questions with thought. But even if they were unable to answer the questions, to acquire the power to consider and debate questions with thought is to attain the end sought for. The points are, however, so intertwined with their daily experience, and with the common things around them, that all may comprehend them.

It is true that the power to question on these common phenomena requires that the questioner shall be a skilled workman, and that he shall view himself as the director, the suggestor, the stimulator, and the child as a being educating himself by self-effort; but such a supposition is allowable.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

THE USE OF NUMBERED OBJECTS.

PRIMARY arithmetic has been greatly the gainer by the introduction of numbered objects as the first stage of number-work with beginners. Under the old plan, the pupil was first taught to say, "One," "Two," "Three," etc., up to twenty, fifty, or one hundred, or he was shown the figures and taught to say their names until he could recognize both. When the toddler in the paths of knowledge came to the "fundamental rules," he was told that 4 and 3 are 7, 5 from 8 leaves 3, and the like.

The teacher trusted to Providence to supply the ideas corresponding to these expressions, and did not trouble herself to be certain the child knew what he was talking about.

But that day has passed in the best schools, and it is now required that the embryo arithmetician shall be able to do with objects his 5 times 4 are 20, 7 and 5 are 12, 6 from 9 leaves 3, etc., etc.

It is not law and gospel that every old thing is bad and that every new thing is good, so it does not follow that the old method of teaching a great number of expressions to the verbal memory did not give the child some substantial and useful arithmetic. Nor does it follow that the use of numbered objects is inseparably joined with success. The point which lies between these two modes of doing the work is that the use of numbered objects will do the work more naturally, surely, and economically; that it is better calculated to awaken and sustain interest, and that it makes certain that the child has an idea corresponding to his words.

In the first stages of his work, the child is greatly benefited by doing, with sticks, pebbles, or some like object, the various operations represented by the expressions he uses. It does not matter whether the Grube method be employed or not, the use of numbered objects is of great value. Suppose the teacher sets out to teach the numbers from 1 to 10. The child is to be required to recognize groups of objects comprising these numbers, and to make readily any of the groups when called for. In like manner, in addition, subtraction, and other simple processes, he is to be required to show, by means of the objects, what he is doing.

This work, like everything of its kind, has its limits. It may readily be overdone. The natural stopping point for it is that stage in which the pupil can do readily whatever he is called upon to perform. When this is the case, the objects should be laid aside and memory substituted for sight.

Do not ask if a man has been through college; ask if a college has been through him; if he is a walking university.

THE USE OF TEXT-BOOKS.

THE great gathering of the clans at Chicago, in that part of the meeting most schoolmasterish, showed that the teaching profession are not at all agreed as to what constitutes the true use of a text-book. In the normal-school section, the question came up and elicited considerable discussion, as to whether the students of psychology in the normal school should or should not use a book. The members of that section are, theoretically, at the head of the profession of teaching, yet they were not of one mind about the use of the book. Is it then to be wondered at that the rank and file are sometimes mistaken about the real function of the text book?

This department of the JOURNAL has already spent considerable time and space in attempting to show the true use of the book. The discussion showed that such attempt was not threshing empty straw, but that there is a live issue involved in the question.

Some teachers, perhaps it would be nearer the truth to say most teachers, believe that the book is the subject, and hence proceed to teach the book. They have their pupils memorize its definitions and learn verbally its statements. Indeed most of our text-books are gotten up with this end in view. Their definitions and principles are purposely so stated that they may readily be committed to memory.

But this is wrong. The book is properly a guide to tell the pupil what to do and where to look. Really, it ought not to contain a single definition, or any other kind of statement, to be memorized. Some of the natural sciences are now getting text-books of the right type. They tell the pupil how to cut, separate or otherwise prepare his material, and what to look for in his examinations. They do not contain anything to be memorized. They are series of directions to be systematically followed in exploring a subject. They supplement the work of the teacher and enable him to economize time in recitation. From them the pupil learns what he can profitably study and what not, and they are a record of what has already been done in the subject he is studying.

As before pointed out in these pages, the text-book can supply no material. It exists in the experience of the pupil, and in the objects which constitute the subject-matter of the study. A misconception of this fact is the great mistake of the old-style text-book. It is also one of the most serious mistakes of those teachers who teach book. Equally erroneous is the idea that results of long processes of thinking can be transplanted into the pupil's mind without taking him carefully over the processes themselves.

COUNTRY SCHOOL DEPARTMENT.

[Conducted by W. H. CAULKINS, Supt. Tippecanoe County.]

THE BEGINNING.

WE can not say too often that the teacher should know exactly what he is going to do. Here you are with a roomful of children before you waiting to be told what to do. Shall you make a long speech, or read a long list of rules, or go to each one separately and take his name? Or shall you set each class in arithmetic at work solving problems written on the black-board previously? Which way will give the pupils most confidence in you? Is it not better to put the whole school to work at once than to leave half of them with idle hands ready for mischief?

What do you expect to do at recesses? Shall you let the children play in the school-room? Shall you permit them to leave the school-grounds? Do you intend to insist on good manners in play as well as in lessons? Is it lowering your dignity to play with the children? If the children should know how to play rude and boisterous games only, have you a stock of something better to teach them? What shall you do to amuse and instruct them when bad weather prevents out-door recesses? How about the noon recesses? If you go home for your dinner, what kind of order do you expect to find your school-room in when you return?

Here are two pictures of real schools. Which is yours to be like?

Picture No. 1. "Excused!" There they go, helter-skelter, scrambling over the seats and one another in a rush for the lunch-pails. "Drop that! that's my basket!" "Hurry up, and get out of the way." "Eat fast, Jack, we want to finish that game this noon." The bread-and-butter and meat disappear rapidly, its course interrupted perhaps to throw a crust at George, who is chasing Sam around the room. Loud laughter and louder talking fill the room with confusion. "I'm done, hurry up, boys," and Pete jams his lid into his dinner-pail, with a toss pitches it into the corner, and with a wedge of cake in his hand and an apple in every pocket goes out to finish that game. Tom, Dick, and Harry, each with some part of his unfinished lunch in his hand, follow, and the uproar of play begins. The floor and desks are left covered with crumbs and disorder reigns.

Picture No. 2. "Position! Turn! Rise! Pass!" At the quietly spoken signals those who go home for dinner pass out. "Position! Turn! Rise! Pass! Seats!" A selected one from each family has quietly brought the dinner-basket. Napkins appear. The lunches are spread out over the desks and a gentle buzz of conversation fills the air. The teacher sits at his own desk, a model for his pupils. Good manners in eating are taught incidentally by every motion. As each group finishes, the dishes are carefully replaced in the baskets, the crumbs brushed from the desks, and each sits waiting for the rest to finish. The last one stows away the final bite of apple; the teacher rises, and the school quietly pass out, depositing their baskets in an orderly row. Does not all this teach that "ninth branch" which the law mentions?

Tr. "Read the first paragraph, Mary."

M. "If I were a voice,—a persuasive voice,—
That could ——"

J. "Please may I get a drink?"

Tr. "Not now. Go on, Mary."

M. "That could travel the wide world through,
I would fly on ——"

P. "May I sit with Jennie to get my spelling lesson?"

Tr. "Yes."

M. "I would fly on the beams of the morning light,
And speak to men with a gentle might,
And tell them ——"

L. "I can't pronounce this word."

Tr. "Spell it."

L. "E-x-i-g-e-n-c-y."

Tr. "Exigency. Go on, Mary."

M. "And tell them to be true.
I'd fly, I'd fly o'er ——"

R. "Where's the geography lesson?"

Tr. "Finish Indiana. Go on."

And Mary finally gets through. Shall you permit this continual interrupting, or will you teach your pupils to respect the rights of others? For, certainly, to deprive the class reciting of their full time and your undivided attention is an infringement of their rights. Further, it is bad manners to break in and interrupt another when he is talking. Why not have it understood that all questions must be asked between classes; that all leaving seats and passing around the room must be done between classes?

How are you going to keep the primary grades employed while the advanced classes are reciting? Supposing the first grade recites in reading twice, in number once, in language once, in general exercises twice, there are still left five hours out of the six; and for these five hours you must provide interesting seat-work, else the children will provide it themselves. What plans have you made for this? Should you keep these youngest children copying, or writing all this time? Will they be interested in that? We think not. It has been tried, and we have seen it fail, time and time again. Ten cents will buy a thousand cigar-lighters, and a thousand cigar-lighters will furnish splint-work for the largest primary class in the state. Shoe pegs; beans; dissected maps and pictures; outline pictures; clay and sand-molding; paper-doll making; color-sorting; leaf-grouping; drawing with slate and pencil, or paper and pencil; sentence-

building from printed words on card board; paper-folding; word-building from printed letters; working or drawing on the black-board; thread-work, may any or all be used to good advantage. The country school is surrounded by millions of objects which could be utilized for this work. Will you drive these children over the old tread-mill of monotonous work, or lead them over this beautiful road of play?

What amount of time shall you devote to natural science other than geography? Is it not possible that these boys and girls who tread over the roads and through the fields do not know the names or the properties of the commonest plants? We have found it so. Might they not know very little of the familiar birds and insects and other animals? Nearly all of them will get no school education beyond the district school course; so, if it can be done, ought not there to be some science taught in these schools? Undoubtedly; and it can be done, for it has been done.

It is a good plan to let the pupils occasionally conduct the opening exercises. Think up some interesting exercise and appoint a pupil who is habitually tardy to conduct it. He will be on time for once. Make the children feel that the beginning of the day is the pleasantest part of it, and your tardiness will become a minimum. Declamations, if well chosen and not too long, are good exercises. Short stories, Bible passages once in a while, poems, singing, conversation exercises, can all be used if you know how. Closing exercises also are a part of the work of some schools.

By the end of the first day you ought to know pretty well the standing of each of your pupils, together with his disposition, habits of thought, ability, and other mental traits. Such knowledge is of the utmost importance, for upon such knowledge depend your success in government, in assigning lessons and other work, and the ease with which you do all your following teaching. Study each pupil closely, and note all his characteristics, then from your knowledge of psychology determine how to man-

age him. The manner of moving, of standing, of talking; the quickness he shows in understanding and answering a question; the remembrance of last year's teaching; the reasoning ability,—these are all telling you what kind of a pupil you have hold of. Notice his manner of playing, and how he treats his play-mates—you have the key to his disposition. Shall you let all these signs escape you, and go on blindly, when you might see your way clearly?

CIPHERING MATCH.

A ciphering match is a profitable and interesting Friday afternoon exercise for country schools. The plan is similar to that for an old-time spelling match. Captains choose their men. Two of the same grade—one from each side—pass to the board. The challenged party names the work; for instance, “Multiply by 25—Divide by 33—Addition of Common Fractions—Interest, rate 8%, etc. The teacher gives the data, and the test is to secure the correct result *first*. The defeated one takes his seat, and another man from his side takes his place. The one who stays at the board longest is the champion. The results are accuracy and rapidity in the common and practical arithmetical calculations. Try it.

THE SCHOOL ROOM.

[This Department is conducted by G. F. BASS, Supervising Prin. Indianapolis schools.]

BEGINNING SCHOOL.

ARE you ready to begin school? Is your school-room clean? Floor swept and scrubbed? Curtains clean and in order? Have you the apparatus in order and in its proper place? Or is the globe covered with dust and so loose on its stand that when you attempt to show how the days are now growing shorter, it will fall on the floor, producing a terrible catastrophe? Are the maps torn from their rollers? Are they dirty? These things should be attended to before the morning of the first day.

The seats should be looked after too. Are there any loose ones? Are there any broken, or in such condition that they might tear one's clothes? The black-boards may need blackening or cleaning. The erasers should be examined to see if they are so worn that their further use will injure the boards. Is the stove and stove-pipe ready for use? They should be blackened. Of course heat could be produced without this, but *with* this more than heat would be produced.

Are the out-buildings clean and clear of marks? Or are they filthy? See to it that they are models of neatness. Have all marks covered with paint or whitewash or otherwise obliterated. If pupils are in the habit of marking, visit these houses every day, and erase every mark as fast as you find it. Do your best to detect the one who is doing the marking or writing. Many ways will suggest themselves. If a vulgar word is left where it can be seen it suggests another. Then see that none are left.

Have weeds grown up in the play-ground during vacation? They should be removed. They should not be cut and left on the ground to decay. They should be burned.

Have you a well? It should be examined to see whether rats or other animats have dropped into it during vacation. The pump should be in good order. The ground should be higher about the well, so that when it rains the water from the yard will run *away from* the well and not *into* it.

The teacher is not expected to *do all* of these things, but he should *see* that they are done. There are officers whose business it is to do nearly all of them. They are not teachers, generally. They have other business to attend to. They are likely to omit some things that should be done. They would see to them if the teacher asked for them.

MISTAKES IN LANGUAGE.

FOUR-FIFTHS of the mistakes made in the English language are made in the use of a little more than thirty words. In speaking it is almost impossible to make a mistake in the use of a noun. In using the pronouns *him*, *her*, *me*, *us*, *them*, and *who*, mistakes

occur. The following verbs are troublesome: *blow, break, choose, come, do, draw, drink, eat, freeze, go, grow, know, lay, lie, ring, see, set, sit, shake, speak, take, tear, throw, wear, write*. The adjectives *a* or *an, this, these, that, those*, give trouble.

Since the *use* of language is a habit, why not begin early to teach children the correct habit?

These might all be taught thoroughly by the time the pupil has completed the Third Reader. He can be taught *how* to use them but not *why*. He need not—in fact he *should* not be taught to call these words—*pronouns, verbs, adjectives*, etc. He needs no terms or definitions.

When he says, "The wind blew the tree down yesterday," tell him *blew* means yesterday. "I have broke my slate." Say *have broken*. Tell him that *have* and *broke* do not go together. Give him such sentences as follows, and have him supply the words omitted, selecting them from the above list or forms of them:—

Mary ——— her dress.

My slate is ——— .

Has the bell ——— ?

My fingers are almost ——— .

Who is at the door? ——— .

——— do you wish to see?

——— boys like to skate.

——— kind of days is unpleasant.

Give me — apple and — large orange.

All of these words should not be presented to the pupils at once. Use only a few at a lesson. Review, review, review, review! Use them in every conceivable way. Have pupils fill blanks in all kinds of sentences. Have them make sentences using the words. Have them correct one another. But leave no incorrect written form before them. If any are placed on the board, correct as soon as possible. The incorrect form if left on the board produces as great effect on the pupil's mind as the correct one.

We speak of educating our children. Do we know that our children also educate us?—*Mrs. Sigourney*.

SHORT NOTES.**"READ NATURALLY."**

Don't say this to a child. It does not help him. He can't do it, if he *tries* to.

GIVE THEM TIME.

Give the First Reader pupil time to look through a sentence before he attempts to read it. If he begins before he has studied it, he will say one word, or possibly two at a time, and his reading is *jerky*. Lay a card over a sentence and slip it along as fast as you can call words, and see what kind of reading *you* will do.

"ORAL GEOGRAPHY."

Teachers should remember that the so-called "oral geography" is not taught for the sake of the facts themselves. One would suppose, to listen to some recitations, that the chief end is to teach the children what part of the school room the teacher's desk occupies. Read the articles on Geography, in the Primary Department of the Journal.

RECITATION.

"Why are you conducting this recitation?" Suppose some one should step in and ask us this question, could we give an intelligent answer? We should so conduct every recitation that such a question from an intelligent person would be entirely superfluous. The end of the recitation should be so clearly in the mind of the teacher that every step in the work would lead in the direction of the end in view.

MEANING OF PUNCTUATION MARKS.

They do *not* mean keep the voice up, raise it, or let it fall. The children should be taught their meaning, incidentally. Take the following sentence as an illustration: Children do play. Children, do play. Do children play? How children do play! Any child can be led to see what each sentence means, and that the punctuation mark helps to interpret the meaning.

TOBACCO.

It is sometimes said that a school teacher who uses tobacco should not tell his pupils not to use it. This is like saying that

if a teacher tasted a poisonous plant and was almost killed thereby, he should not warn his pupils against it. Or if he has a bad habit fixed upon him and knows it to be bad, and is unable to break it, he must not warn his pupils against forming the same habit. No, no. Tell them that using tobacco is a filthy and unhealthful habit; that it will not pay. You know it to be so because you have tried it.

“AN ERROR IN GRAMMAR.”

A proof-reader once said to Mr. Whipple, “Ah, Mr. Whipple, here is an error in grammar.” “An error in grammar?” said Mr. Whipple. “There is no such thing as English grammar. I do not consider it. I write for the rythm—that’s all.”

A prominent educational paper quotes this to show that “some of our best literary authors of the past generation had a poor opinion of English grammar.”

Now, does this mean that we are to pay no attention to the agreement of the verb and noun? Shall we allow the pupils to say, “The boys *is* playing ball?” “Molasses *are* sweet,” and “Vinegar *are* sour?”

“Correct transcripts of what nature says, would make the best grammar ever issued.”

Is there anything in nature that tells us to use *I* as the subject instead of *me*? “Me and John *is* going fishing.” Isn’t this as *natural* as “John and I *are* going fishing?”

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another; we can't do it. We will change as often as asked to do so, but must be notified of each change.

In a recent work, "Spring Days in Greece," Dr. Engel gives an interesting account of the regenerated nation. He attributes its phenomenal development largely to the interest of all classes in education, and in the elevation of the people. It is true the country is still poor and greatly in debt, but wealthy Greeks in Turkey, Egypt, and even Austria take a pride in assisting the new home. Thus through the immigration of wealthy Greeks, Athens has increased its population in the last thirty years from 5000 to 100,000, and sustains a university attended by 4000 students.

Undoubtedly this increase is largely due to a great influx of poor people from the rural districts, who came to serve the inflowing wealth. Among these the young "Street Arabs" are prominent. In order to uplift these, the wealthy people have *of their private means* established free evening schools for all the days of the year. Attendance is perfectly voluntary, and only those who appear regularly are enrolled. In 1886 the enrollment amounted to 620. Dr. Engel spent much time in these schools, and was charmed with the thoroughly respectful, orderly, and industrious bearing of the pupils, whose eagerness to learn enabled them to show marked progress in every direction.

Dr. Engel, though a German, attributes the marked decency and industry of the Athenian youth largely to the absence of the saloon. In all Athens he found but one beer-house, "patronized only by foreigners, mostly Germans." The Greek spends his evenings at home, and family-life is on a high level in modern Athens.

THE FIRST DAY OF SCHOOL.

Old teachers need be reminded and young teachers need be told that the first is the most important day of the school term. 'Tis true, and pity 'tis 'tis true, that most teachers change schools each year, and so will be compelled to organize new schools when they begin to teach this fall. For such teachers as will continue in the same schools they taught last year this article is not intended, but it may contain some suggestion beneficial to them.

The first day is the most important day because, with a new teacher every child is wide awake to see, and hear, and note, and compare, and receive impressions, and to form judgments. On no other day will the teacher's words be so carefully listened to, on no other day will his actions be so carefully scanned, and on no other day will pupils be so much influenced by what he says and does.

Consequently, if the teacher has learned all he could learn about the school—about the classes, who compose them, the points reached in the various text-books;—if he has his plans for opening all matured, so that he can go forward without hesitation, without asking questions, and show himself master of the situation, he will thereby command the

respect of the children and establish himself in their confidence, and make an impression that will be favorable, and that will help him in the management of the school for days and months to come.

On the contrary, if the teacher has no definite plans, does not know what he is to do first, and what second—if he is ignorant of the classification of the school, and is hesitating, and compelled to frequently refer to the pupils for information, he must fail to gain the confidence of the pupils; and the criticisms they make about him at the first recess will be anything but complimentary. Most unfortunate is the teacher who fails to make a favorable impression on the first morning of his school.

THE FIRST THING TO BE DONE. After brief opening exercises, which have been carefully arranged, and which do *not* include a long "speech," *the first thing to be done is to give every child something to do*; and the quicker this can be done the better. The problem is how to organize and not disorganize the school. An idle school, no one can keep orderly very long; a busy school governs itself. Hence the question is how can the teacher, in the shortest space of time, assign work to every pupil.

The following plan is suggested: Learn before the first morning, the classification of the school, together with the points reached in the various books, by each class. In many of the counties trustees require teachers to file written records, giving all needed information. When such records can not be had the new teacher's only resource is the pupils themselves. • It may require some time and trouble to see pupils in the different grades so as to get the desired information, but the teacher can not afford not to get it.

Thus equipped, the teacher can proceed, at the close of the opening exercises, to assign lessons. Each class should be assigned a lesson in arithmetic a few pages preceding the one marking the close of last year's work, and it should consist of problems to be solved with the requirement that the work shall be left upon the slates. This will dispose of the great bulk of any ordinary country school. These being provided for, the teacher can soon dispose of other pupils who may not have been in school before, by assigning them work with some one of the arithmetic classes, with the understanding that the assignment is only temporary. This method gives work and leaves the teacher free to give attention to the little folk, and to attend to other unforeseen matters.

Arithmetic is the best subject to assign as the first lesson, as it is the only one that will insure work on the part of all pupils. Even if a boy should know this lesson, it will require time for him to put the work neatly on his slate.

All the work of assigning lessons should be done inside of fifteen minutes. Thus the school is at work and organized, and not disorgan-

ized. Begin to call these classes before the work is completed, so that none may be idle. Examine the work done, ask a few questions, assign more work, and then assign lessons in other subjects. Pass from class to class so rapidly that all will be kept busy. Very soon the program of the previous teacher may be followed. It is best to follow the order the children are accustomed to, and to adopt the existing classification of the school, and make changes only when a need for changes is developed. A teacher of good taste never *criticises* his predecessor, even when he finds it necessary to modify or change his work.

With reference to order—begin as you expect to continue. It is a fatal mistake to “begin easy,” expecting to “tighten the reins” later, when you have become acquainted. Do not allow anything in the way of disorder the first day that you do not expect to allow later. Announce no rules, but develop them.

The above suggestions will certainly be helpful to young teachers.

THE NATIONAL EDUCATIONAL ASSOCIATION will probably hold its next meeting in San Francisco. The Directors voted almost unanimously to go to California provided liberal terms could be made with the railroads. The President, Aaron Gove, of Denver, is carrying on the necessary negotiations, and the matter will be decided early in October. In the meantime let everybody begin to save up money to make the trip to the west shore.

A NEW RULE of the board of trustees of Purdue University, which requires members of the faculty to be elected “annually,” is said to have had *something* to do with the unprecedented number of resignations that occurred during the past summer. The rule is an unjust one. It is unfair to submit a whole faculty to this unusual ordeal every year in order that it may be made easier for trustees to “drop” a person occasionally when a necessity may arise. Trustees who are willing to assume the responsibilities of their office should not need such a rule. The time is coming when the rule will be changed in the public schools, and teachers will hold their positions during good behavior and efficient service.

THE CONTESTED CO. SUPERINTENDENCY CASES.

As the courts are not in session, there has been little change in the status of affairs in the various counties since the last report.

IN JAY COUNTY both the contestants sent in their resignations, and the trustees after balloting an entire day, elected John E. Bishop, who is said to be a good man. At the previous election the trustees balloted all day and most of the night.

IN MARTIN COUNTY each contestant employed good help and held an institute, and many teachers attended both. They both held examinations, and some of the teachers got certificates from both so as to be on the safe side. In this county there seems to be a question of fact as to whether a majority of the trustees were *present* at the adjourned meeting. There seems to be a difference of opinion as to whether being at the open door and at an open window, and being cognizant of all that was going on constitutes "presence."

IN FULTON COUNTY the contestants are working harmoniously together. They hold the examinations together and both sign the certificates. They propose to submit the case at the first term of court and abide the judge's decision. Sensible.

IN FAYETTE COUNTY the "new" Supt. has held an institute and the "old" one is waiting for a decision of the courts.

IN BLACKFORD COUNTY the institute has been postponed till the contest is settled.

QUESTIONS AND ANSWERS.

QUESTIONS PREPARED BY STATE BOARD FOR JULY.

[These questions are based on the Reading (ircle work of last season.)]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

READING.—Still, through our paltry stir and strife

Glow down the wished Ideal,

And Longing molds in clay what Life

Carves on the marble real.

To let the new life in, we know,

Desire must ope the portal;

Perhaps the longing to be so

Helps make the soul immortal.

Longing is God's fresh heavenward will

With our poor earthly striving;

We quench it, that we may be still

Content with merely living;

But, would we learn that heart's full scope
Which we are hourly wronging,
Our lives must climb from hope to hope
And realize our longing.

—James Russell Lowell

1. Write a concise account of the author.
2. Prepare five questions upon this selection that would aid a class in the Fifth Reader to grasp the thought.
3. Paraphrase the selection.
4. Select and define the figurative words and expressions.
5. Give two reasons for calling this poetry. Define poetry.
6. Write five questions that you would ask a class, to ascertain whether they understand the thought of the selection.
7. What educational principle do you deduce from lines five and six of the selection?

NOTE.—15% off for each question incorrectly answered.

ENGLISH GRAMMAR.—1. What is the difference between a principal clause and an independent clause?

2. How many uses may *what* have in a sentence? Give an example of each.
3. The *child* was hurt. Give the grammatical properties of the word *child*, and tell how you determine each.
4. What distinguishes the personal pronoun from all the other classes of pronouns?
5. What classes of adjectives can not be compared? Why?
6. What elements of the sentence when the verb is in the active voice may become the subject when the verb is changed to the passive voice? Give examples.
7. Is the time expressed by the verb *always* the same as the tense form of the verb? Illustrate.
8. Analyze: *Thrice, in spite of scorn, tears, such as angels weep, burst forth.*
9. Parse the italicized words in the above.
10. Correct the following, giving reasons:
 - a. It has been three years ago.
 - b. I would like a square box.
 - c. I guess it was him.
 - d. Does it look good enough?
 - e. If you look any one square in the face they will flinch.

GEOGRAPHY.—1. Bound Kentucky; locate its capital and its metropolis.

2. Explain the cause of the change of seasons.
3. How do mountains affect rain-fall? Illustrate.
4. What are the chief products of Michigan?
5. Through what countries would one pass on a voyage by steamer

from Basle, Switzerland, to Rotterdam, Holland? Name five of the principal towns passed on the route.

6. Name some of the chief kinds of trees characteristic of the tropics.

7. What is the form of government of Switzerland?

8. What is the chief cause of the growth of Liverpool?

9. Describe the character of the vegetation north of the Arctic Circle.

10. What is the length of the Mississippi River? Its source? Describe it, and name the five largest cities on its banks.

U. S. HISTORY.—1. Name five French discoverers or explorers, and give an account of the work of two of them.

2. Give an account of the settlement of Georgia, stating when and where it was settled, by whom and for what purpose, and mentioning some noted persons connected with this settlement.

3. Give an account of the surrender of Cornwallis, describing briefly the movements that preceded it, and stating its effect upon the American cause.

4. What was the political condition of the country in 1860; what great questions were at issue; what parties brought forward candidates for the Presidency, and who were these candidates?

5. Give a brief biography of U. S. Grant, taking into consideration his business career, his military career, his political career, and his literary career.

SCIENCE OF EDUCATION.—Set forth as completely as you are able your views on any one of the following subjects:

1. Present educational tendencies in the United States.

2. The arguments for and against introducing manual training in the public schools.

3. The legitimate scope and aims of common public school education.

4. The influence of the Reformation on modern education.

PHYSIOLOGY.—Write on the subject of Food and Digestion, using the following outline:

Food—*a.* Necessary food elements (or principles).

b. What articles of food furnish each of these elements?

Digestion—*a.* Organs engaged in.

b. Digestive fluids furnished by each.

c. Organs in which different steps of the process of digestion take place.

d. Rules of health deducible from the study of food and digestion.

ARITHMETIC.—1. The N. $\frac{1}{3}$ of W. $\frac{1}{3}$ of a township of government land was divided among 8 heirs; what was the share of each worth at \$5 an acre?

5, 5.

2. Each of 20 persons owns 367.5 acres of land; how much do they all own? Solve by multiplying by 2, and explain your work. 3, 3, 4.
3. $\frac{1}{2}$ of $\frac{1}{3} = ?$ Solve by analysis, and show why the common rule is correct. 3, 3, 4.
4. A mile of fence was built at 75 cts. a rod; afterward the fence was capped at $1\frac{1}{2}$ cts. a foot; what did the whole cost? 5, 5.
5. 4 chickens and 7 turkeys together weighed 72 lbs.; the average weight of a turkey was 4 times that of a chicken; what did each weigh? 5, 5.
6. Reduce $9\frac{9}{11}$ to 17ths, and explain your work. 3, 3, 4.
7. A vessel sailed from a certain port at high noon, due west 60 degrees, thence due north 30 degrees; the chronometer not having been changed, was it then slow or fast, and how much? 5, 5.
8. A note for \$1000 was due in 12 mos., with 6% int.; the holder offered $\frac{3}{4}\%$ discount a month on all paid before maturity; at the end of 6 mos. \$100 was paid, and at the end of 8 mos. \$200; what was due at maturity?
9. A man traveled 300 miles by stage, canal, and rail, traveling 20% more by stage and 20% less by rail than by canal. How far did he travel by each method? 2, 2, 3, 3.
10. What is the side of the largest square that can be inscribed in a circle 12 in. in diameter? 5, 5.

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. Verrazani, Cartier, Champlain, Marquette, La Salle. Cartier sailed in 1534 from St. Malo, in Brittany, and after a very short voyage reached Newfoundland. Sailing round this, after many attempts to find an inlet to the westward, through the information of some Indians he discovered the St. Lawrence River, opening up to his country the great district of the Canadas. In 1673 Marquette, a Jesuit missionary, in company with Joliet, acting under information from the Indians, discovered the Upper Mississippi, and sailed down it to about where De Soto had crossed it first. This discovery, some nine years later, was utilized by La Salle, who called the whole country drained by the great river, Louisiana, laying the foundation of the district which we eventually purchased in the administration of Jefferson under the name of the Louisiana Territory.

2. Jas. Oglethorpe, an Englishman, commiserating the sufferings of the poor of his country, and especially poor debtors, petitioned George II for the grant of a colony where such persons could settle. Accordingly a part of South Carolina was laid off, organized into a separate colony and granted to a corporation for twenty-one years in trust for the poor. This was done in 1732, the year in which George Washington was born. The next year Oglethorpe sailed with one

hundred and twenty emigrants, who made a settlement at the present site of Savannah. In this colony the importation of rum, slavery, and trading with the Indians was all forbidden. Shortly after the settlement Georgia was visited by John Wesley, who remained less than two years; by Chas. Wesley, his brother, who was Secretary to Oglethorpe, and remained only a short time; and by Geo. Whitefield, who lived and died in this country.

3. General Greene, after several important engagements, the last at Guilford Court House, N. C., in which, though not entirely successful, yet less distressed and crippled than Cornwallis, was nearing the border of Virginia, having succeeded in gaining Georgia and the Carolinas for the Americans. Clinton supposed the possession of the Chesapeake Bay, with the country adjacent, would give the British the key to both north and south; he therefore ordered Cornwallis to occupy Yorktown, which he did, soon to find himself menaced by Greene on the south, La Fayette on the west, and the French fleet north of him. Clinton believing that Washington was about to attack New York, left Cornwallis exposed. Washington hastened to Virginia, and soon Cornwallis found himself hemmed in and without hope of succor, and at the end of a month surrendered his army to the Americans and the French, to the great gratification of France, the immense relief of anxiety and the restoration of high moral courage to the Americans, and the equal dismay and disheartenment of the British.

4. The growing commercial importance of the products of the South had strengthened the slave power to such an extent that, carrying the doctrine of state-rights to excess, they were determined to resist all encroachments of the northern principles of abolitionism or free-soilism. The South generally adopted these views, which were most strongly held by southern Democrats, the southern Whigs having almost died out. The old antagonism of the West against the East was soon in abeyance, and the country had drifted into the political condition of North and South parties, with a small but respectable third party, known as the Union or National party. The real question at issue was the extension of slave territory by the South, and its resistance by the North. The Republicans nominated Lincoln, the Democrats split, the northern portion nominating Stephen A. Douglas, and the southern John C. Breckenridge, while the Union party nominated John Bell. Lincoln was elected, and the South seceded.

5. Ulysses S. Grant was born at Point Pleasant, Ohio, in April, 1822. After a common school education was appointed to West Point in 1839, graduating in 1843. He distinguished himself in the Mexican war, reaching a First Lieutenancy. In 1848 he married Miss Dent; in 1853 he was made Captain, but resigned from the army in 1854. In 1860 he went into the leather business in Galena, with his father. In 1861, at the breaking out of the Civil War, he raised a company

and reported at Springfield, Ill. In June he was appointed Colonel of the 24th Illinois Volunteers, entering the Department of Missouri. From this time to his transfer as General-in-Chief to the Potomac, his history is parallel with that of the Western Campaigns, and after his transfer with that of the Eastern Campaigns, ending in the surrender of Gen. Lee at Appomatox, with such terms as showed the magnanimity of Grant as a military conqueror. He was elected President in 1868, serving two terms. His administrations were marked by many important events, but he was not so skilled in the knowledge of men politically as he had been in military life. He made a voyage round the world, the record of which, with his personal memories, constitute his literary work. They are characterized by the terse precision and accuracy of his military career. He died in 1885.

PHYSIOLOGY.—I. The human body is composed of a variety of chemical elements. Few foods, through the action of the juices of the digestive canal, furnish all these elements—both organic and inorganic. Hence the necessity of variety in food. Soda, salt, lime, phosphorus, iron, sugar, fat, oil, etc., etc., are found in the body. Hence the value of such inorganic foods as those mentioned, together with starches and food having them, gluten, casein, fibrin, etc., as found in meats, milk, cheese, grains, etc.

2. Organs directly engaged in digestion: Teeth, tongue, salivary glands, muscles of the pharynx, stomach and intestines, blood vessels, gastric, biliary, pancreatic, and intestinal glands.

Digestive fluids furnished: Saliva, gastric juice, pancreatic juice, bile, intestinal juice. [How far mucus assists in digestion is uncertain].

In the mouth the food is chewed (or ought to be) and mingled with saliva; through the pharynx it passes to the stomach, where it is churned thoroughly and mingled with the gastric juice; in the smaller intestines the churning process goes on on a smaller scale, mingling the biliary, pancreatic, and intestinal juices with the rapidly changing nutritive materials. Digestion can not be said to take place at any one point, as it is a gradual process, part being completed in the mouth, the remainder usually in the small intestines—depending upon the kind of food.

From the preceding, it would seem to be indicated that we should eat both ordinary vegetable and animal food, together with fruits and grains, and some inorganic elements. That we should chew thoroughly and slowly, and allow the body a rest of at least thirty minutes after a meal in order that an extra supply of blood may go to the digestive organs to furnish sufficient juices for the chemical changes required. As the condition of the mind affects these juices, a pleasant and equable temper at meals is beneficial.

READING.—2. (a) What is the poet endeavoring to point out to us as a means of growth? (b) How do we realize this? (c) What figures of speech in the first stanza, and how do you express them in your own words? (d) What mistake are we said to make? (e) What is it to realize one's longing? Can you give an instance in which you realized or failed to realize *your* longing?

5. One reason for calling this poetry is that it is written in verse. Another is, that it is also so written as to ennoble thought, arouse the imagination, and produce pleasurable feelings.

6. (a) What is an Ideal? Give an illustration. (b) What influence does the author think that Ideals have over our lives? How? (c) Do you agree with his view? Why? (d) Tell what you think is meant by the word "longing" as used in this relation, and why it is called "God's fresh heavenward will." (e) How and why do we "quench" this feeling, and how does this quenching keep us from "learning the heart's full scope"? (f) Can you mention any person of note, in whose life the truth or falsity of the thought of this selection is manifested?

7. Through the feelings of pleasure and pain (but especially of pleasure, because affording higher incentives) interest may be aroused, the will brought into play, and the attention so fixed as most likely to lead to successful effort.

GRAMMAR.—1. A clause is *independent* when it forms an assertion by itself, as in compound sentences. In a complex sentence, the term *principal* is applied to the clause which expresses the chief part of the thought. By grammarians these words are sometimes used as synonymous terms.

2. (1) Interrogative Pronoun; as, *What* is man that Thou art mindful of him?

(2) Relative Pronoun; as, Pay *what* you owe.

(3) An Adjective; as, *What* news from Genoa?

(4) An Adverb; as, *What* (partly) with generosity and *what* with extravagance, the man was ruined.

(5) An Interjection; as, *What!* is thy servant a dog?

3. *Child* is applied to both sexes, and is masculine or feminine gender, singular number because one object is meant, third person because something is asserted of the child, and in the nominative case because it is the subject of the sentence.

4. Personal pronouns are so called because, *by their forms*, they mark differences of *person*. Number and case are also indicated by the *forms* of these pronouns.

5. "Most definitive and many descriptive adjectives can not be compared, as their meaning will not admit of different degrees."

6. The object of a verb in the active voice becomes the subject when the verb is changed to the passive voice. Active voice: The

Greeks worshipped Bacchus, the god of wine. Passive voice : Bacchus, the god of wine, was worshipped by the Greeks.

7. It is not. The present tense is often used in describing past events to place them more vividly before the mind ; as, "He *mounts* the scaffold ; the executioners *approach* to bind him," etc. The present may be used to denote a future event ; as, The ship sails next week. The form of the past tense is sometimes used to denote present time ; If he *were* conscious of his mistake, he would certainly be troubled, etc.

8. This is a complex sentence, of which *tears, such as angels weep*, is the logical subject, and *burst forth thrice, in spite of scorn*, the logical predicate. *Tears* is the subject nominative, modified by the adjective phrase *such as angels weep*. Of this phrase, *such* (used substantively) is the principal word, modified by the relative clause *as angels weep*, of which clause *angels* is the subject nominative unmodified, *weep* is the predicate verb, modified by the object complement *as*. Of the principal clause, the predicate verb *burst* is modified by the adverbs *forth* and *thrice*, and also by the adverbial phrase *in spite of scorn*.

9. *Thrice* is an adverb of time, modifying *burst*. *Spite* is a noun, common, neuter, and the object of the preposition *in*. *Such* is a pronominal adjective, third, plural, and in the nominative case, in apposition with *tears*. *As* is a relative pronoun and agrees with its antecedent *tears* in gender and number, and is the object of the verb *weep*. *Angels* is a noun, common, third, plural, and in the nominative case, subject of *weep*.

10. (a) It was three years ago.
- (b) I should like a square box.
- (c) I think it was he.
- (d) Does it look well enough?
- (e) If you look squarely in the face of any one, he will flinch.

NOTE.—In No. 8, *such as angels weep* may be expanded into *such tears as the tears which the angels weep, are*, and may be disposed of accordingly.

GEOGRAPHY.—1. Kentucky is bounded on the north by Ohio, Indiana, and Illinois, from which states it is separated by the Ohio River ; on the east, by West Virginia and Virginia ; on the south, by Tennessee ; on the west, by Missouri, from which it is separated by the Mississippi. Its capital is Frankfort, in the north central part of the state, on the Kentucky River. Its metropolis is Louisville, in the northern part of the state, on the Ohio River.

2. The change of seasons is due to the fact that the earth makes its revolution around the sun with its axis inclined $23\frac{1}{2}^{\circ}$ to the plane of its orbit. Hence, the direction in which the sun's rays strike any part of the earth's surface is constantly changing, and the amount of

heat received varies accordingly, for, the more nearly perpendicular the rays are, the more heat they impart.

3. Mountain chains condense the moisture borne by the winds. The warm air is borne upward along the slope of the mountain; its vapors are condensed into clouds, whence rains descend upon that side of the mountain, while on the opposite side, the air descends as a dry wind. The Sierra Nevada, in California, and the Cascade Range, in Oregon, lying in the path of the warm return trade winds, separate well-watered coast regions from a dry interior.

4. Sawed lumber, copper, iron, salt, wool, fruits, grain, and maple sugar.

5. (a) German Empire and Holland. (b) Strasburg, Mayence, Coblenz, Dusseldorf, Cologne.

6. Palms, bananas, bread fruit tree, rosewood, mahogany, and ebony.

7. A Federal Republic.

8. Its advantageous location on the wide estuary of the Mersey, and its contiguity to the British manufacturing districts, "as well as the enterprise of its inhabitants," give to Liverpool a leading position in the trade of the world.

9. Mosses, lichens, stunted trees, and shrubs with edible berries; also a few Alpine plants, are the chief forms of vegetation found north of the Arctic Circle.

10. (a) The Mississippi River is 2,616 miles in length. (b) Its source is in Lake Itasca, in the northwestern part of Minnesota. (c) Its course is generally in a southerly direction, through the central part of the United States, flowing into the Gulf of Mexico. (d) St. Louis, New Orleans, Minneapolis, St. Paul, Memphis.

ARITHMETIC.—1. $\frac{1}{3}$ of $\frac{1}{3}$ of a township = $\frac{1}{9}$ township, or 36 sq. mi. $\frac{1}{9}$ of 36 sq. mi. = 4 sq. mi. 4 sq. mi. \div 8 = $\frac{1}{2}$ sq. mi., or 320 A. $\$5. \times 320 = \1600 . Ans.

2. 20 persons own 20×367.5 A. Moving the decimal point one place to the right multiplies the number by 10. To multiply by 20 this answer must be twice as large. 2×3675 A. = 7350 A. Ans.

3. $\frac{1}{3}$ of 1 = $\frac{1}{3}$; but since 1 is 5 times $\frac{1}{5}$, my product is 5 times too great. $\frac{1}{3} \div 5 = \frac{1}{15}$.

4. $\$34 \times 320 = \240 . $\$.015 \times 5280 = 79.20$. $\$240 + \$79.20 = \$319.20$, cost.

5. $1 + 4 : 72 :: 1$: smaller, or 14.4.

$1 + 4 : 72 :: 4$: greater, or 57.6.

$14.4 \div 4 = 3.6$ lb, or 3 lb, 9.6 oz., weight of one chicken.

$57.6 \div 7 = 8.2\frac{2}{7}$ lb, or 8 lb, $3\frac{2}{7}$ oz., weight of one turkey.

6. $9\frac{9}{11} = 9\frac{1}{11}$. $1 = \frac{11}{11}$; $9 = 9 \times \frac{11}{11}$, or $\frac{99}{11}$; $\frac{99}{11} + \frac{1}{11} = \frac{100}{11}$, Ans.

7. $60^\circ = 4$ hr. 4 hr. fast. Ans.

8. The am't of \$1000 at 6% for 12 mo. = \$1060.

$\frac{3}{4}\%$ a mo. for 6 mo. on \$100 = \$4.50.

$\frac{3}{4}\%$ a mo. for 4 mo. on \$200 = \$6.

\$4.50 + \$6 = \$10.50.

\$1060 - (\$200 + \$100 + \$10.50) = 749.50. Ans.

9. $\frac{5}{8}$ by canal, + $\frac{4}{5}$ by stage, + $\frac{1}{5}$ by rail = $\frac{15}{8}$, or 300 miles.

$\frac{1}{5}$ = 20 miles.

$\frac{4}{5}$ = 100 miles by canal.

$\frac{1}{5}$ = 80 miles by rail.

$\frac{1}{5}$ = 120 miles by stage.

10. Radius $6 \times \sqrt{2}$, or $1.4142 + = 8.4852 +$ in. Ans.

DEPARTMENT OF QUERIES AND ANSWERS.

[This Department is conducted by J. C. GREGG, Superintendent of the Brazil Schools.
Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

[16] A room is 20 ft. long, 10 ft. wide, and 10 ft. high: What is the shortest distance a fly can walk from one lower corner to the opposite upper corner?

WILL S. STOOPS, *Rossville, Ind.*

[17] Where is "Liberty Bell" at present?

HENRY STURHMAN, *Santa Claus, Ind.*

[18] The sides of a field whose diagonals are equal, are 25, 35, 31 and 19 rods in successive order: Find the area.

C. C. CARTER, *Neelyville, Ill.*

[19] What two fundamentally different views are held as to the essential nature of the mind? Explain briefly each view.

S. E. HARWOOD, *Attica, Ind.*

[20] How many feet, board measure, in a wagon-tongue 12 feet long, 4 inches square at the larger end and 2 inches at the smaller?

W. D. H., *Edinburg, Ind.*

[21] Spell the plural of two, to, and too.

E. H. FISHER, *Butler, Ind.*

[22] Two perpendiculars 50 and 30 feet, are 80 feet apart on a plane. Lines drawn from the top of the one to the bottom of the other cross each other. How high above the plane will the crossing be?

Id.

Several excellent queries are reserved for future use.

Answers should be sent in not later than September 14th.

ANSWERS.

[10] Capt. S. E. Dutton, in his report on the Hawaiian volcanoes, pronounces Mauna Loa the king of volcanoes; the most terrific and active in the world. A moderate eruption of Mauna Loa represents more matter than Vesuvius has emitted since the days of Pompeii.

W. H. HOFFMANN, *Washington, Ind.*

[11] As a motive-force fear should be made an incentive, provided that it be not exacted in an "unnerving and prostrating intensity." Terror, which is an intense degree of fear, should not be excited in the pupil. *Id.*

[12] Draw AB horizontal = 40 ft. = a;

AE perpendicular to AB = 40 ft. = b;

BC perpendicular to AB = 50 ft. = c;

ED parallel to AB. Then DC = 10 and EC the distance between the tops of the buildings = $\sqrt{40^2 + 10^2} = 10\sqrt{17}$. From the middle of EC draw a perpendicular HN, N being the foot of the foot of the ladder, and EN and CN the ladder as it touches either building. CE = 10, 17; therefore EH = $5\sqrt{17}$. In the triangles EDC and EHF, ED : EC :: EH : EF or $40 : 10\sqrt{17} :: 5\sqrt{17} : EF$, and EF = $21\frac{1}{4}$. Draw EK parallel to HN. It is easily shown that the triangle EAK = EDC: and AK = DC = 10.

AK + KN = AN = $10 + 21\frac{1}{4}$, the distance of the foot of ladder from lower building. $\sqrt{(31\frac{1}{4})^2 + 40^2} = 50.75$, length of ladder, or $1(8\frac{3}{4})^2 50^2 = 50.75$. A. M. SCRIPTURE, *Clinton, N. Y.*

[13] The key to the Bastille is hanging in the entrance hall to Mt. Vernon. It was sent to Gen. Washington by Lafayette soon after the destruction of the stronghold by the Paris mob on July 14, 1789.

DE LA COFFEE, *Spencer, Ind.*

[14] It is evident that he wanted to make $4\frac{4}{33}\%$ of $103\frac{1}{8}\%$, which is $4\frac{1}{4}\%$, as can be found with 24 figures thus:—

$$\begin{array}{r} 1.03\frac{1}{8} \\ .04\frac{4}{33} \\ \hline \end{array}$$

$$\begin{array}{r} 4125 \\ 125 \\ \hline \end{array}$$

$$.0425 = 4\frac{1}{4} \text{ per cent.}$$

LENA MATHIAS, *Cochran, Ind.*

No. 15 is one of the best queries yet offered, but no answer to it has been sent in. Will some one answer for next month?

CREDITS.

Ella Opperman 14; Wilson Palmer 14; Samuel Wertz 13; W. F. Hoffmann 10, 11, 12, and 14; C. C. Carter 10, 11, and 12; J. D. French 12 and 13; Chas. O. Du Bois 7; J. D. Brand 5 and 6; W. S. Stoops 7; Florence Markley 7; Henry Stuhrman 12 and 14.

MISCELLANY.

THE INDIANA STATE FAIR will be held in Indianapolis beginning September 19. Every live farmer should be there to see the improved stock and the new devices in machinery.

QUOTATIONS AND SELECT STORIES FOR OPENING EXERCISES, by Geo. F. Bass, of Indianapolis, has gone to the spot. It goes off "like hot cakes." Teachers say it is "just the thing." A second edition has been ordered, and the author is happy.

CORRECTION.—In the advertisement of the National Normal at Lebanon, Ohio, a mistake occurred last month. In giving the annual enrollment the figure "5" was accidentally dropped, and so the number appeared 200, instead of 2500, as it should be. The last graduating class numbered over 200.

THE ELEVENTH ANNUAL COMMENCEMENT of the Central Normal, at Danville, held July 28, was an occasion long to be remembered by those participating in the exercises. The re-union of old students, the society exercises, and the graduating exercises, were all up to expectation and above, and everybody was happy. The outlook for the school the coming year is flattering. Mrs. F. P. Adams is principal.

NEWTON COUNTY.—In this county the school exhibit is made a marked feature of the county fair. A large number of prizes are offered for the different grades of school work; and in addition prizes are offered for the best essays and declamations, which are to be delivered in the different grades. The number is limited, and the participants are determined by preliminary contests. Supt. W. H. Hershman directs matters.

A CORRECTION.—*My Dear Sir:* I think the solution of problem seven of the June list is wrong as given in the August Journal.

Date of settlement Sept. 1. Then the first payment, \$100, draws interest for 6 mo. at 6% (from March 1 to Sept. 1.) $\$100 \times 1.03 = \103 , amount of first payment at time of settlement. The second payment, \$200, draws interest for 3 mo. at 6% (from June 1 to Sept. 1.) $\$200 \times 1.015 = \203 . $\$1000 - \$103 + \$203 = \694 . Present worth of \$694 for the time to run (4 mo.) is the amount due Sept. 1. $\$694 \div 1.02 = \680.392 , amount due Sept. 1. Ans.

Very respectfully yours, JNO. N. MYERS, *Wabash*.

LAWRENCE. KANSAS, July 28, 1887.

Dear Sir:—Will you be kind enough to give notice in your next issue, that to ensure receiving a copy of the *Journal of Proceedings* of the session of the National Educational Association just held at Chicago, members should notify me at once, by postal card, of their present addresses and of their desire to secure the volume.

This notice is necessary because of the number who are believed to have taken advantage of Association railway rates, yet who have no interest in the proceedings; and also because of possible errors in addresses, due to the unavoidable confusion at the Railway Secretary's office.

Very truly yours,

JAMES H. CANFIELD, *Secretary N. E. A.*

READING CIRCLE NOTES.

SULLIVAN COUNTY TAKES THE LEAD on a long stretch. The first year of the Reading Circle, out of 135 teachers, 127 joined the circle, bought the full set of books, and *paid the fee*. The second year 97 bought the books and paid the fee. The third year 120 bought the books and paid the fee. The slight falling off from the first year is accounted for by the fact that a few teachers did not buy the new books but continued to read the old ones.

Supt. J. A. Marlow says that the books have not only been bought, but that they have been read, and that he can see a marked improvement in the ability of his teachers as a consequence.

In several counties the Reading Circle has been an entire failure because "the work was so heavy that it was utterly impossible for the teachers to do it." How can these different results be accounted for?

COUNTY INSTITUTES.

BARTHOLOMEW CO., with Howard Sandison and Arnold Tompkins to to the work, had "the best institute ever held in the county."

VIGO CO. held two institutes this year: one for the country teachers and one especially for the Terre Haute teachers. Both were well conducted.

WAYNE CO.—With the new Supt., B. F. Wisler, to direct, and T. G. Alford, W. F. L. Sanders, and J. V. Coombs to work, Wayne county had no trouble in making its usual high record.

DELAWARE CO.—Institute held August 8. With R. G. Boone, M. J. Mallery, Thos. Newlin, and Belle Thomas as principal instructors, success was insured. Supt. J. O. Lewellen moves things on time.

GRANT CO. kept up its reputation for excellent institutes. Instructors, George F. Bass, W. H. Mace, Eli F. Brown, with side help of E. M. C. Hobbs, W. A. Bell, and State Supt. La Follette. Supt. Ellis is making a good start.

WARREN CO.—Two weeks' session, August 1-13; 150 enrolled. S. E. Harwood and Miss Charity Dye, principal instructors. The interest was excellent. The new Supt., F. Goodwin, is making a good start and is much liked.

JACKSON Co.—Held August 8; teachers enrolled 148; instructors, J. A. Woodburn, T. G. Alford, G. F. Kenaston, G. D. Lind, and J. M. Callahan. The best institute ever held in the county. The new Supt., W. B. Black, is starting well.

PARKE COUNTY.—Institute held August 1; attendance 150 to 175; principal instructors E. E. Smith and Mrs. McRae. Supt. La Follette one day; interest excellent. One of the best counties in the state educationally. W. H. Elson, Supt.

CARROLL Co. held a large and valuable summer normal, which was followed by the institute August 22. The instructors were Arnold Tompkins and A. E. Davisson, and their work was well received. The work in the county is in good condition, the schools being well graded. Supt. J. L. Johnson is a hard worker.

REPORT OF NORTHERN IND. TEACHERS' ASSOCIATION.

HELD AT LAKE MAXINKUCKEE, JUNE 28, 29, AND 30.

The meeting was held at the Palmer House, one of the pleasantest places on this beautiful body of water. On the first evening, the President, D. D. Luke, delivered his inaugural address. Subject: "Ethical Culture in our Public Schools." The address was replete with suggestive and practical thoughts. He thinks that the chief aim of education has changed from that of mere memorizing to that of reflecting; that the whole fabric of mental instruction is based upon rational methods; and that each social change evolves some ethical change. He would make a wide difference between theological religion and ethical culture. He believes that the teaching of theological religion in the school-room is offensive: but to give the pupils the ability to see God's plan in the flower, in the animal, in man, in everything, is ennobling.

June 29—Appointment of Nominating Committee. Prof. Alpheus McTaggart, of the State Normal, read an excellent paper on "Moral Training in the Public Schools." The author reviewed the present state of society and attributed much of the responsibility of such condition to our public schools. He regards moral instruction as a development not only of the sensibilities but also of the intellect. He believes that it is impossible to cultivate one power of the mind without strengthening the others: that a good example is the most potent agent in the formation of good moral character in the pupil: and that the moral instruction is the highest duty of the teacher.

The discussion of the paper was opened by W. A. Bell. He believes that the homes and churches are more responsible than the schools for the present state of society; that the schools are doing more than they get credit for—more than the church and home combined. He believes

that all laws, whether physical, mental or moral, come from God, and that everything we do should conform to these laws.

The discussion was continued by A. McTaggart, and Mr. Boltwood of Evanston (Ill.) high school. Mr. Boltwood thinks that the teachers are not doing as much as they would like to do, because of the mistaken idea, prevalent in many communities, that morality can not be taught without teaching theological religion.

"Philosophy of Expression" was the subject of a carefully prepared paper by Miss Tressa J. Crocker, teacher Delsarte System of Expression, Logansport. She spoke of its importance and the necessity of teaching it more thoroughly and more systematically in the public schools. She gave a clear and concise explanation of the uses of the various organs of expression.

The discussion was opened by T. J. Sanders and was continued by W. A. Bell and others. All the speakers complimented the paper very highly.

"More Knowledge for the Teacher" was the subject presented by Henry Gunder, Supt. of North Manchester schools. He criticised the tendency at the present time to give primary teachers limited examinations. He believes that it is within the powers of every true teacher to take two or three studies each year in addition to his regular school duties—thus completing in a few years a complete college course. He opposes the stated test examinations, on the grounds that they make the teacher narrow.

The subject was warmly discussed by Messrs. Boltwood, Saunders, Mace, McTaggart, and Bell.

In the afternoon H. M. La Follette, State Supt., delivered an excellently prepared address on Victor Hugo. He regards Shakespeare, Goethe, and Hugo as the greatest of all human teachers—each excelling in certain lines of education. He dwelt especially upon the influence of Hugo as an educator. He says that this influence is felt not only in France but in all the civilized world, not only among his friends but also among his foes.

H. B. Jacobs, Supt. of the Institute for the Blind, gave a very enthusiastic address on "That upon which we Build—The Thought." He believes that there has been too much attention paid to having pupils prepare for examination and not enough time spent in the study of the characteristics of the children. He would shorten the courses of study and devote more time to the formation of right character in the children. He believes that the mental and moral faculties are so closely related that we can not train one without developing the other; that while man naturally goes forward, the degree of advancement depends upon circumstances. These surroundings may be the commendations of true friends, the adversities overcome, or awakening the feeling of wonder in the minds of the pupils.

At the evening session, by request Miss Farster favored the association with a well rendered vocal solo. Prof. O. J. Craig, of Purdue, delivered the annual address—subject, "Leadership." He says "that before persons engage in any enterprise they are apt to enquire into the character of those who are already engaged in it"; and that we judge of the merits of a cause by the leaders of that cause. He thinks that an efficient system of schools implies an efficient superintendent. He has no sympathy for the teacher who complains that she can not interest her pupils. He names the following as the essential elements of success in any avocation: enthusiasm, devotion to duty, character, singleness of aim. He believes that a teacher must not only be able to grapple an emergency but to create one.

Miss Crocker and Dr. Overholser, of Logansport, gave us beautiful recitations at the close of the address. Miss Crocker also recited "Casca" at the close of the afternoon session.

June 30, the Nominating Committee made the following report:

President—E. W. Wright, Kendallville.

Vice-Presidents { Miss Harriet Caspar, Bourbon.
 { Miss Laura B. Agan, Huntington.

Secretary—Calvin Moon, South Bend.

Treasurer—W. H. Sims, Goshen.

Executive Committee—J. C. Clack, Ch'n, Logansport; R. A. Chase, Plymouth; Henry Gunder, North Manchester; Miss Josie Fielding, Warsaw; Mrs. Emma Mont. McRae, Marion.

The report of the committee was concurred in.

W. H. Mace, of De Pauw Normal, read a paper entitled, "The Methods of U. S. History in the High School. He thinks that U. S. History may be and ought to be presented to the child in such a way that he can comprehend it. This would necessitate a series of histories adapted to the various grades. Completeness of thought must be the aim of the high school history. The writer thinks that we should pay more attention to the growth of civilization, and objects to the omission of the study of the Articles of Confederation, the Declaration of Independence, and the Constitution.

D. W. Thomas, of Elkhart, thinks that there is too much attention paid to the teaching of the text-book and not enough to the teaching of the thing; that there must be a definite purpose in the teaching of any lesson, and this purpose must be determined by the teacher—the teacher must direct.

"Co-operation of Parents" is the subject of a well prepared paper by Mr. Douglas. He thinks that to secure the right influence of the whole is but to secure the support of the individuals. The writer believes that the teacher is partially responsible for the present condition of things. He says that the way to interest the parents is to let them know that there is something for them to do. He believes that we:

should visit them frequently and have confidential talks with them; that these visits should be made before any trouble arises; that the parents may be led by these visits to make frequent tests of the work of their children; that special invitations should be sent out to the parents asking them to visit the school, and then make it pleasant for them when they do come; that the teacher should do this not so much from a sense of duty as from an interest in the child's welfare. He believes that our newspapers should take more interest in the work of the schools; and less in murders, robberies, and other crimes.

Supt. La Follette thinks that the work of country pupils is better than that of the city pupils, because the parents are so much more interested in school work.

The next paper was read by J. F. Scull, of Rochester. Theme, "The School's Place in Education." The educational institutions named are the home, the church, the school, the newspaper. He took up each one of these topics and presented its work in the scheme of education. He believes that the school curriculum should be shortened and more attention should be paid to industrial education.

Several persons took part in discussing the point—what should be stricken out. No two of them wanted to cut out the same subjects.

D. D. Luke, after a few appropriate closing remarks, adjourned the meeting to a time and place to be fixed by the executive committee.

D. D. LUKE, *President*.

J. C. BLACK, *Secretary*.

PERSONAL.

W. S. Hoover goes to Sandborn.

W. R. Nesbit is Supt. at Sullivan.

W. N. Gates directs at Abbingdon.

F. G. Boone is the man at Merom.

R. S. Ruckels directs at Edwardsport.

C. F. Fox takes charge at Port Fulton.

John Swisher is principal at Jonesboro.

Elmer Shurtz will hold forth at Bicknell.

C. A. Riley is principal at Freelandville.

W. W. Craig is principal at Middletown.

Alonzo Gates is the best man at Bruceville.

J. O. Edgerton is the best man at Webster.

Geo. W. Meikel is at the head at Economy.

Wm. Furr will direct affairs at Veedersburg.

J. H. Tomlin will remain principal at Clinton.

- R. M. Milburn directs school affairs at Jasper.
- J. E. Clifford will serve a second year at Ewing.
- J. P. Jones is the educational leader at Fairmount.
- J. W. Birchfield will continue principal at St. Paul.
- W. D. Chambers continues in control at Scottsburg.
- Everett Shepardson will continue in charge at Shoals.
- Chas. Hewett seems a fixture as Supt. at Knightstown.
- J. F. Engle, a State Normalite, is principal at Lexington.
- S. A. D. Harry is the new Supt. of the Covington schools.
- J. F. Study continues in the superintendency at Richmond.
- Oscar R. Baker is principal of the Knightstown high school.
- J. G. Scott, late of New Providence, goes to Cloverport, Ky.
- J. N. Barnard will faithfully direct the schools at Springport.
- W. S. Almond continues faithful to the interests of (Old) Vernon.
- J. W. Walker, formerly of Green county, is now Prin. at Oaktown.
- Miss Carrie Furber remains as Prin. of the New Castle high school.
- Levi Ulrich will "teach the young idea how to shoot" at Greensboro.
- A. J. Johnson, one of Indiana's old and tried teachers, will continue at Milton.
- T. J. Shea, a graduate of the State Normal, is to have charge at Loogootee.
- W. H. Cain continues at Carlisle, where he has taught, lo, these many years.
- Wm. W. White will remain in charge of Rich Square Academy, near Lewisville.
- T. A. Mott, one of Wayne county's leading teachers, is principal of the Dublin schools.
- J. H. Bobbit, late Supt. of Decatur county, is to be principal at Paxton the coming year.
- John A. Wood, last year at Clinton, expects to finish his course at the State Normal this year.
- Ritter, a graduate of the Valparaiso Normal, will take charge of the Crothersville schools.
- Wm. Stratford was re-elected Supt. at Vevay, and R. L. Thieban principal of the high school.
- E. B. Atkinson, formerly of Parke county, is now Supt. of Burt Co., Neb. His address is Tekama.
- Thos. Newlin is principal of Spiceland Academy, and also principal of the Spiceland public schools.

John E. Bishop is the new Supt. of Jay county, as the result of the resignation of the two contestants.

H. C. Montgomery resigns the high school at Seymour, to accept the superintendency at Gilman, Ill.

W. W. Cheshire, formerly Supt. of Lake county, will superintend the schools of Salida, Colorado, the coming year.

W. Steele Ewing, former Supt. of Miami county, has for several years past been principal of the Dover Hill school.

D. D. Luke, for many years the Supt. at Ligonier, has accepted an appointment at Washington, in government service.

E. M. Teeple, late principal of the schools at Charlestown, has accepted the principalship of the high school at Portland.

W. M. Croan, formerly Supt. of Madison county, still reports progress and success in his normal at Shenandoah, Iowa.

Edgar Stinson, of Ohio, will take the principalship of Fairmount Academy, *vice* E. O. Ellis, elected county superintendent.

R. A. Chase has served seventeen years as Supt. of the Plymouth schools, and the people still desire his services. *Strange!*

J. W. Hesler will continue in charge of the Centreville schools. These schools are prospering and will add a teacher this year.

W. D. Kerlin, of the high school, was promoted to the superintendency of the New Castle schools upon the resignation of C. W. Harvey.

Miss Harriet Caspar, a State Normal graduate, whose article we printed in the August Journal, will be principal of the high school at Bourbon.

Prof. and Mrs. Dennis, of Earlham College, did institute work at Tekama, Neb., this summer, and the report of it in an Omaha paper is flattering indeed.

V. Livingood has resigned the superintendency of the Covington schools to accept a position in the faculty of the Inter-State Normal School at Covington.

F. N. Dewey, a graduate of Hillsdale College, has been elected Supt. of the La Grange schools. This will be his first experience as superintendent of schools.

S. W. Percy, who was four years in charge of Fairview Academy, Rush Co., Ind., is now at the head of a Classical and Business College at North Middletown, Ky.

E. B. Milam and W. H. Pennington, both former superintendents of Knox county, have gone into business together in Vincennes. They deal in books and general school supplies, and can furnish a teacher almost anything he needs. They also represent A. H. Andrews & Co. in Knox and four adjoining counties. They deserve success.

S. S. Parr, dean of De Pauw Normal School, was elected President of the Normal Department of the National Association. Mr. Parr is now in Europe, studying educational problems.

Mrs. Eudora Hailman, principal of the La Porte Training School for Kindergartners, was elected President of the Kindergarten Department of the National Educational Association. An excellent choice.

W. W. Parsons, Pres. of the State Normal, was urged recently to consider a proposition to accept the presidency of a western college, at an advanced salary, but fortunately for the Normal and for Indiana, he declined.

J. W. Perrin, formerly principal at Newport, but for two years past principal of one of the ward schools at Danville, Ill., has been promoted to the high school as teacher of English. Mr. Perrin passed successfully the examination for an Indiana state certificate, last year.

State Supt. H. M. La Follette is traveling day and night attending institutes. He averages one a day. He is giving special attention to the Reading Circle work. He appreciates its importance. He is well received everywhere, and makes a good impression on everybody he meets.

Miss Emily A. Hayward, a graduate of Antioch College, formerly teacher in the Brookville high school, but for several years past in the high school of Springfield, Ill., has been elected teacher of Latin in the North Denver, Col., high school, at a salary of \$1000. This is a deserved promotion.

Eli F. Brown, as heretofore announced, resigned the superintendency of the schools of Paducah, Ky., on account of ill health. He has removed his family to his old home at Irvington, near Indianapolis, and has taken a state agency for The People's Encyclopedia, and will make Indianapolis his headquarters. Both Mr. Brown and his Encyclopedia are well and favorably known in Indiana.

C. W. Harvey, one of Indiana's most efficient and most respected superintendents, as heretofore noted, resigned the superintendency of the New Castle schools at the close of last school year. He had been in the educational work *thirty-nine* years—nineteen of them in Indiana, divided between Greensburg and New Castle. Mr. Harvey is now located in Richmond, engaged in the drug business.

BOOK TABLE.

THE OLD NEST," is the name of a piece of music by J. W. Rugle, and published by S. C. Hanson, of Williamsport, Ind., who supplies the words. The words are good and the music "*looks*" well. That is as far as the editor of the Journal can go in making a notice.

JOURNAL OF PEDAGOGY is the name of a new paper edited at Athens, Ohio, by J. P. Gordy, Ph. D. It looks well and reads well, and is likely to continue—for some months.

OUR AUGUST PANSY has come with its forty pages of boy and girl stories and pictures. We wish we could lend it to all the young folks we know. But, what is better, send to D. Lothrop Company, Boston, for it. The subscription price is \$1 a year; but they will send you one number for five cents—it may be a back number. It is a veritable missionary.

HOW TO TEACH NATURAL SCIENCE IN THE PUBLIC SCHOOLS: *By Wm. T. Harris. Syracuse, N. Y.: C. W. Bardeen.*

This is No. XI of a series of school-room classics published by Mr. Bardeen. The above was made by Mr. Harris for the St. Louis schools while he was Supt. To know that Dr. Harris did the work is sufficient to commend it to the careful consideration of all well informed teachers.

HISTORY OF THE AMERICAN PEOPLE: *By Arthur Gilman, M. A. Published by the Inter-State Publishing Company, Chicago and Boston. 668 pages.*

Mr. Gilman has given us a most excellent history for general reading or for schools. The type is bold and clear, the illustrations numerous and well chosen, and the style simple and interesting. It will rank among the best for class use in the advanced grades.

HEALTH LESSONS: *By Jerome Walker, M. D. New York: D. Appleton & Co. C. E. Lane, Chicago, Western Agent.*

One of the chief charms of this book is the language. While it is plain and simple, such as very young children can comprehend, it does not, at any time become babyish. It is intended for the use of primary schools. It is attractively illustrated. It is intended rather as a reading book than a book for study, and to the teacher is committed the privilege of expounding the text, making it interesting, and thrusting as much of the good advice home to the children as they can grasp and practice. It is, in every respect a little gem.

A GENEALOGICAL TREE OF THE ROYAL FAMILY OF ENGLAND: *From the time of Egbert, 827, A. D., to Victoria, 1887, A. D. Prepared by Juliette Mount Mooney, of Vincennes, Indiana.*

It is in chart form, and appeals directly to the eye. The lower trunk of the tree represents the Saxons, and the projecting branches show the different rulers under the Saxon regime. The invading Danes are not grafted on the Saxon trunk, but take root for themselves. The advent of the Normans gives the tree still another root, which shoots up and out, developing at different intervals the Plantagenets, the Tudors, the Stuarts, the House of Brunswick, and lastly Queen Victoria. It is an ingenious production, and will certainly aid the student greatly in fixing the line of descent of the English kings.

FIRST STEPS IN SCIENTIFIC KNOWLEDGE: *Complete in seven parts. Philadelphia: J. B. Lippincott Company.*

(1) Animals; (2) Plants; (3) Stones and Rocks; (4) Physics, (5) Chemistry; (6) Animal Physiology; (7) Vegetable Physiology. The first part contains 84 pages; the second and third together, 70; the fourth and fifth together, 129; the sixth and seventh together, 91. Total 374 pages, bound in one volume.

In each part the elementary principles or most important facts are clearly and simply set forth, and wherever needful, experiments are freely used. The work abounds in illustrations, summaries, and subjects for composition. It is a foreign work, by Paul Bert, member of the Institute and ex-Minister of Public Instruction of France. The translation has been revised and corrected by Wm. H. Greene, M. D., Professor of Chemistry in the Philadelphia Central High School.

There is no other similar work before the public. No teacher should be without it.

A THIRD READER: *By J. H. Stickney. Published by Ginn & Company, Boston*

This book is in keeping with the style, plan, and appearance of the First and Second, issued some months ago. "The aim of the editors and publishers of this series has been to advance children more rapidly, not simply in the oral reading of set lessons, but in that to which fluent oral reading is a means, the taste for a kind of reading which will ennoble and instruct." To accomplish this, the lessons are not so disconnected, the subjects are continuous in character, and are mainly literary in their nature, and the style is largely narrative, which make interesting reading.

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No. 10.

OPENING EXERCISES.

SIGEL E. RAINES.

THE subject of Opening Exercises is one not a great deal discussed by educators and works upon methods, hence what I shall set forth in this paper will, to a great degree, be the result of my own observation and experience in the school-room.

The Opening Exercise, standing as it does at the beginning of the day's work, sustains about the same relation to the remaining work of the day as the first day's work sustains to the after work of the year; and if it be poor in quality, other things being equal, the work of the day will be poorer than had the exercise been good, and *vice versa*. Hence, the importance of good, strong, life-giving opening exercises.

As to the nature of the exercise, it may be devotional, moral, or intellectual. The devotional and moral are generally classed as one, but for clearness and definiteness I shall consider them separately.

The exercise as devotional may consist of singing, scripture lessons, prayer, and kindred things. The purpose of these exercises is, pre-eminently, to teach and impress upon the child his relations to the Infinite, and inspire him with love and reverence for God as his heavenly Father.

The exercise of song is no small factor in this work. Music softens the feelings, quiets the mind, and promotes thought.

Music seems to pervade all around with gentleness and refinement. It appears to be incompatible with rowdiness and disorder. In proof of this I have had the grammar school, some mornings, come bounding up the stairs, and when seated they were so full of uneasiness and restlessness that eels would seem stupid as compared with them; but when the organ sounded the prelude for the opening song, in a moment all would become as calm and peaceful as if some fabled musician of old had led them captive by his rich melodies.

In singing the children should be led to sing smoothly and softly. The rough, discordant tones heard in some singing harrow up the mind and arouse the baser feelings. Such tones, either in singing or speaking, tend to promote disorder, and should be banished from every school room.

Music also has a stimulating influence. To this Congreve testifies as follows: "Music hath charms to soothe a savage breast, to soften rocks or bend a knotted oak." "I've read that things inanimate have moved, and, as with living souls, have been informed by magic numbers and persuasive sound. The meaning of song goes deep. Who is there that in logical words can express the effect music has upon us?"

The best form that I can put it in is: "That it is a kind of inarticulate, fathomless speech which leads to the edge of the Infinite and lets us for a moment gaze upon its rich treasures of the good and beautiful."

In devotional exercises, the purpose of the lessons from the Bible should be, first to impress the child with a sense of God's parental love and presence, so as to arouse in him sentiments of love and reverence for the Creator. To do this we must take as a basis the inherent love and reverence of the child and its manifested development in the family. Froebel says these sentiments and even that of religion are a part of our natures, born into us, and are not implanted by education, but it is our duty to educate and develop them. This, then, forms our true basis for such work.

To teach him his relations to God as his heavenly Father, the ground work must be the relations which he sustains to his pa-

rents in the flesh. Such passages as "Honor thy father and thy mother, that thy days may be prolonged," may be made a sufficient basis from which to impress upon him these relations.

To show God's rule in relation to men, biographies of various Bible characters are very hopeful. For instance, in Abraham we see the necessity of implicit faith; in Jacob, the ruling of a nation; and in Job, the reward of patience. From these also, excellent moral lessons may be adduced.

In presenting the nature and character of God, nothing is of greater utility than the Bible emblem.

In the expression, "The Lord is my Shepherd," we have the graces of watchfulness, tenderness, and loving care set forth in a way that at once appeals to the child's understanding. But in using these emblems the teacher must first fully explain and illustrate the object of reference in the figure; then may be given the emblem and its spiritual interpretation.

Directly associated with the emblem is the parable, which probably excels it in value, as it appeals directly to the child's experience, thus creating *interest*, the *mother* of attention. Their concreteness also is in the child's favor. Parables should be viewed first in their literal sense, and secondly in the figurative, making the application of the one to the other in every particular. In the ability of the teacher to make a clear and concise application of the spiritual to the literal will lie her success in teaching the parable.

In using the Bible we must sedulously avoid the rock upon which so many teachers have dashed their bark to pieces, and that is in regard to interpretation. The teacher must teach morality, not religion; principles, not creeds and doctrines; justice, not plans of salvation. He must be a man, not a sectarian; in short, he must be a spiritual devotee working for the good of the human family, endowed with every grace, hewing just to the line, but never beyond it.

Opening Exercises, as intellectual, will consist of reading, talks upon interesting topics, story telling, etc. In this kind of an opening exercise much interest can be created and a great deal of information given, but these, in such an exercise, are second-

ary to other things to be gained from it. Hence I shall pass it by with just this casual glance.

For *moral training* is the opening exercise especially adapted, and every kind may be used to attain this end. But in accomplishing this a great many other valuable things are wrought. I shall leave this part of opening exercise for a future paper by some one, and proceed to the discussion of some particular exercises.

The first of these is poetical quotations, and gems of thought generally. Some author says: "Quotations are the watchwords of great men," and if properly taught, I say they may be made the watchwords of children as well.

From these every kind and variety of conduct may be reached, and general injunctions given in such a way as to reach any individual case.

A good motto or a wise proverb ringing in the ears of a pupil is a stimulant to his conscience and a faithful monitor warning him from wrong. These exercises should be put on the board, and together with the name of the author committed to memory. Then should come a conversational exercise, in which the teacher should talk *with* the pupils rather than *to* them. In any school work, if you want to create interest, the pupils must be permitted to do a good share of the work. In this talk let the work be cumulative and expand. Talk about the meaning of words, figures of thought, places mentioned, and let the children lead in discussion and line of thought so long as it tends to give them general information. If there is any one thing in which pupils are more lacking than another when they go out of school, in is general knowledge. We need less of the meanderings of circulating decimals, fewer of the vagaries of demonstrative, pronominal, definitive adjectives, and more of the practical things of everyday life going on around us.

This, the opening exercise can be led to do admirably. In the talk casually mention the author, speak of incidents of his life, his birth-place, where he lived, some of the most important things he has written, and for what his writings are noted. Do not make this formal, but give it incidentally, remembering the old adage,—

"Men must be taught as if you taught them not,
And things unknown proposed as things forgot."

As I have said before, let the children do a part of the talking, and the larger this part the more beneficial the exercise. And not only let them talk, but write as well.

One great bugbear in school work is composition writing. It is neglected till the pupil has lost all confidence in his ability to think a single thought for himself, or, even possibly thinking one, he has no power to express it. And when after a while he is called upon to write we hear the doleful cry, "I can't."

We learn to *do by doing*. The way to learn to make a shoe is to make a shoe, and since this is the case the sooner we begin the better. Here in this work is a good place to begin.

After the quotation has been committed and discussed one morning, designate four or five pupils, each to write a certain number of words or lines upon the quotation for the next morning, and if the exercise has been interesting they will comply cheerfully, and you will find this to be a more interesting exercise than the previous one, especially to the pupils. They will listen with bated breath when another pupil is reading a selection they know to be his own.

Moreover, the lessons upon the quotation trains the memory, reason, conversation, and power of expression, besides the information given and moral lessons learned.

Gems of thought are of more utility in the opening exercises than is any other means of bringing about a multiplicity of good results with the least amount of time and effort put forth.

There are many other things in regard to opening exercises which I would like to speak about, but they each could not be discussed in this paper, already of inordinate length, without making it a volume; hence I shall close by briefly summarizing: Opening exercises are very important as they stand at the head of the day's work. They may be intellectual, devotional, or moral, the latter being their most valuable phase, the intellectual part necessarily taking the same line as other school work. And as to general utility "gems of thought" occupy, by far, the most

important place of all exercises given, as in them may be realized all the objective points to be gained by the beginning work of the day.

SULLIVAN, IND.

THE BEST GOOD.

BY W. H. VENABLE.

THE first line of the *Khorda-Avesta*, one of the Persian sacred books, says, "Purity is the best good." Christ said, "Blessed are the pure in spirit, for they shall see God."

Purity is the most difficult of the virtues. Mortal man can not wholly attain it. Through freezing and through flame must he pass who would be pure.

Oh, ye who teach the young, who guide their feet towards the "best good," tell them the story of the ermine which suffers itself to be slain rather than soil its spotless vesture by contact with the unclean. Teach them to love whatsoever things are pure; to hate whatsoever things are corrupt.

The body is the instrument and the image of the mind. Every influence that affects the body reacts on the thoughts, feelings, and will. Plato said, the good soul makes the good body, but it is just as true that the good body makes the good soul. An enemy of Horace Mann, wishing to disparage by sarcastic praise, described the great educator as an "eminently clean" person, meaning to intimate that his immaculate bodily habits were his highest virtues. The sneer was not called for. Mann's external cleanliness was typical of his inward character.

Clear water is an infinite civilizer. We may profit by that item of Mahommedanism which makes it a religious duty to wash often. The Koran enjoins the faithful, in the absence of water, to perform their ablutions with clean, white sand.

Soap is a system of ethics. Dirt is anti-spiritual, and allies humanity to the swinish links in evolution's chain.

The Ottomacs of the Orinoco eat unctious earth, and the natives of Terra del Fuego daub their bodies with mud. Filth and gluttony, forms of impurity, are two of the grossest customs of

the savage. Captain Parry reports a young Esquimau who devoured thirty-five pounds of food in twenty-four hours; I have read of a South Sea Islander who ate a whole sheep at a meal.

The disgusting filth and excess of wild and brutish man too often survives, in modified degrees, among the civilized and "refined." The grossness of mere animal comfort and appetite keeps pulling men back. To what base enjoyment does God's image resort! What coarse and revolting pleasures sway the immortal mind! Eat, drink, and be merry! Reflect on the strange ways men have devised to gain happiness. Consider what is meant by "having a good time." Imagine the thousands of tons of tobacco puffed and chewed; and the rivers of alcohol poured down the throat simply to stimulate the nerves and excite poignant sensations.

. Beyond the fetid marshes of drunkenness, and the parched deserts of nicotine rolls the Phlegethon of lust in which men bathe, and yonder stretch away what gulfs of sensuality unimaginable!

Inexpressibly strange and sad that man should forsake the pure and rush to his doom. I have read that in some tropical land there grows a tree—the deadly manchineel—beneath which, if the inadvertent traveler reposes, and in a sudden shower, the rain drops from its leaves upon him, in frightful agony he awakes, covered with blisters and ulcers. Him the juice of the trumpet tree may heal, but what antidote can cure the wretch infected by the droppings of the tree of sensual indulgence?

Sir Guyon, in the "Færie Queene," seeks false Acrasia in the Bower of Bliss, the retreat of seductive pleasures. There the Knight found a herd of hideous beasts. These had been men, the devotees of Delight, loiterers in the Bower of Bliss. Sir Guyon, by his virtuous power, restored one of these, named Gryll, from the form of a hog to his human shape. But the work of degradation had been thoroughly accomplished. Gryll repined at his restoration and yearned for his former beastly condition. Insensible to the appeals of temperance or charity, incapable of enjoying the pure in any form, the fallen man was left to his beastly will. "Let Gryll be Gryll and have his hog-gish mind."

Because any child may approximate to the condition of Gryll, or may, like Sir Guyon, wear the untarnished armour of Purity, overthrow the gardens of sin, every teacher should remember that the moral virtues are teachable, and that moral instruction is the first duty of every teacher.

Purer than the mountain dew, whiter than sky born flakes is the atmosphere of education. The sentiment and the language of instruction should be such that no blot or stain could touch the soul of the pupil. A holy light should pervade tuition. Might not boys and girls grow up with principles so sensitive to truth and purity that they would be forever self-shielded from the false and the foul? Was it Wordsworth or Emerson that felt an instinctive repugnance to the taint of uncleanness in Goethe's *Wilhelm Meister*?

They are benefactors of youth who use pure words. "Is not mine host a witty man?" asks the hunter of the fisherman in *Walton's Angler*. The fisherman replies: "To speak truly, he is not to me a good companion. A companion that feasts his company with wit and mirth, and leaves out the sin which is usually mixed with them, *he is the man*. And let me tell you, *good company and good discourse are the very sinews of virtue*. But *for such discourse as we heard last night, it infects others*."

Whatever is obscene, vulgar, degrading, or of questionable delicacy infects the young. Blood poisoning is not more perilous than thought poisoning. We know temptation must be met, nevertheless, "lead us not into temptation." The school is the temple of safety. Within its sacred walls we are delivered from evil. There only good counsels, and examples, and books, and pictures, and symbols should come. There every low desire and every tainted fancy should feel rebuked. There purity, like a guardian angel, should ever abide.

CINCINNATI.

WHY CANON FARRAR SIGNED THE PLEDGE.

My reasons for taking the pledge were partly general and partly special. First, I became convinced that the use of alcohol in any form was not a necessity. I saw that whole nations

have lived and flourished without it. I believed that the whole race of man had existed for centuries previous to its discovery. I was struck by the indisputable fact that in England 20,000 inhabitants of our prisons, accustomed to it all their lives, and the majority of them brought into prison directly or indirectly by the use of it, could be, and were, from the moment of their imprisonment, absolutely deprived of it, not only without loss, but with entire gain to their personal health. Men enter prison sickly and blighted, are deprived of drink, and leave prison strong and hale; and women who, when incarcerated, are hideous to look upon, after being made compulsorily sober by act of Parliament, recover the bloom of health and almost of beauty.

Next, I derived from the recorded testimony of some of our most eminent physicians, that the use of alcohol is a subtle and manifold source of disease even to thousands who use it in quantities conventionally deemed moderate; and from the testimony even from many who discountenance total abstinence, that all the young, and all the healthy, and all who eat well and sleep well do not require it, and are better without it. Then the carefully-drawn statistics of insurance societies convinced me that total abstinence, so far from shortening life, distinctly and indisputably conduce to longevity. Then I accumulated evidence that drink is so far from being requisite to physical strength or intellectual force, that many of the greatest athletes, from the days of Samson onwards, "whose drink was only of the crystal brook," have achieved, without alcohol, mightier feats than those which have been achieved with it; and many of the world's wisest, said Pindar, have yet drawn out a better inspiration from other sources than can be drawn chemically from the fumes of wine.

Seeing all which and much more, seeing, too, in the Holy Scriptures, God's own approval of his Nazarites, who, as the prophet Jeremiah tells us, were purer than snow—"They were whiter than milk, they were more ruddy in body than rubies, their polishing was of sapphire"—I saw, or thought I saw, grounds sufficient, and superfluously sufficient, to make me an abstainer.

GEOGRAPHICAL INSTRUCTION IN GERMANY.

POLYTECHNIC SCHOOLS.

[Translated from the German by Howard Sandison.]

The plan of instruction of Polytechnic schools is the following:—

	VI	V	IV	IIIB	IIIA	IIB	IIA	IB	IA
Religion.	3	2	2	2	2	2	2	2	2
German	3	3	3	3	3	3	3	3	3
Latin	8	7	7	6	6	5	5	5	5
French.	—	5	5	4	4	4	4	4	4
English	—	—	—	4	4	3	3	3	3
History and Geog.	3	3	4	4	4	3	3	3	3
Arith. and Mathe.	5	4	5	5	5	5	5	5	5
Natural History . .	2	2	2	2	2	2	—	—	—
Physics	—	—	—	—	—	3	3	3	3
Chemistry	—	—	—	—	—	—	2	2	2
Writing	2	2	—	—	—	—	—	—	—
Drawing.	2	2	2	2	2	2	2	2	2
Singing	2	2	2	2	2	2	2	2	2
Gymnastics.	2	2	2	2	2	2	2	2	2
	32	34	34	36	36	36	36	36	36

SCOPE OF WORK.

In History as in the Gymnasia; in Geography the same, with this addition: "General consideration of the main routes of trade in and between the countries of the most important civilized nations of the present."

Explanations thereto: "For this instruction, essentially the same observations hold, as for the plan of instruction of the Gymnasia. Through the whole plan of instruction of polytechnic institutions, it is nevertheless conditional, that in Grecian and Roman History, the range of instruction of the higher grade is more limited (to one year in the second [class], while in the Gymnasia both years of this class are devoted to ancient history), and mediæval and modern history come into prominence. As in the Gymnasium, here also the history of Germany forms the central point, and that of the other European states come into consideration only in so far as it is of importance for the former.

But in this inter relation the French and English history in the polytechnic institutions must receive a greater consideration, in order to render easy the introduction of the pupils into the literature of these nations. For the imparting of facts and dates, a prudent moderation is here also stringently necessary, and the detailed acquaintance with the separate divisions is to be acquired only through reading.

In the classes VI to III, two hours each are used for the geographical instruction. In the second class, of the three hours appropriated for history and geography, one is to be devoted to supplementing and enlarging the geographical knowledge. If the historical and geographical instruction is given by one teacher it is allowable that the three weekly hours be employed alternately upon one of the two subjects. The testimonial concerning the knowledge of geography which a pupil, by his promotion to the first class, has received, is, at the proper time to be included in the certificate of graduation.

To the scope of the work in Mathematics belong the elements of spherical trigonometry, in so far as they are essential to the understanding of mathematical geography; to the scope of Physics [belongs] certain knowledge of the derivation of the more important principles of the province of mathematical geography.

The regulation of the final examination contains as "the standard for conferring the certificate of graduation" the same requirements as in the Gymnasia.

The oral examination extends to History and Geography. The regulations for accomplishing this read: "The historical examination has especially for its subject the history of Greece, of Rome, of Germany, and the Prussian States. An examination in geography is not held. In the uniting of geography to history, the investigation of geographical knowledge belonging to the understanding of history only, is required. The percentage for geography, obtained by the promotion to the first class, is included in the certificate. The Real progymnasia (lower polytechnic schools) stand in the same relation to the Real gymnasia

(higher polytechnic schools) as the Progymnasia to the Gymnasia.

The foregoing regulations for the final examinations in the Real gymnasia find application in a corresponding sense for the final examinations in Real progymnasia.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

THE GREATEST ENGLISH PEDAGOGICAL LIBRARY IN THE WORLD.

THE editor of this department thought that, for the month of October, the readers of the JOURNAL would be more interested in hearing something about the great pedagogical library at South Kensington, London, than in reading any disquisitions on method. The claim made by the caption of this article is believed to be correct, and this is really the greatest English pedagogical library in existence. It is to English-speaking people what the great Berlin pedagogical library is to Germans, and the Library of the Paris Normal School is to Frenchmen. But, alas! what shall one say to correspond in speaking about Americans, except what is implied in calling this the greatest library of the English-speaking race! But America will not long be behind. The "cute Yankee," as the *Telegraph* called the Americans the other morning, is not the fellow to bring up the rear end of the procession long. The National Department of Education has begun a collection of books and papers which no doubt some day will be worthy of the magnificent system of popular education it represents.

South Kensington, as many readers of the JOURNAL already know, is in the heart of modern London, not far from Picadilly, Cheapside, The Tower, and The Bank, which are landmarks in the huge aggregation of people and houses the English people call their metropolis. We say "near," but near is after all a very relative term and means in this case some three miles away.

But the city stretches miles and miles beyond South Kensington. The Educational Library is in the group of buildings containing the natural science exhibits, the illustrations in archæology, and part of the paintings and statuary of the British Museum.

The Library numbers about 60,000 volumes, distributed among twelve heads, including School Architecture, General Education, Drawing and the Fine Arts, Music, Social and Political Economy, Geography and Astronomy, Natural History, Chemistry, Physics, Mechanics, Appliances for Teaching Persons of Deficient Faculties, and Hygiene and Physiology. From this it will be seen that only a small part of the library deals with the technicalities of teaching. Works on didactics proper, are perhaps not over one-twelfth of the whole number. This fact emphasizes anew what we have often heard, that to find a literature of teaching, one must go to the German or the French.

The Library of Didactics is the one with which this article will concern itself. The statement made about the Educational Library, of which it is part, holds true of it—it is the largest collection of books in English relating to didactics in the world. It contains almost all of any importance written in English, besides many translations and many works in other languages. The great majority of its five or six thousand volumes are tracts or pamphlets. The nearest approach to an educational psychology found in it, is Sully's *Outlines of Psychology*, the abridgment of which either is a book for the coming year in the Indiana Reading Circle, or was talked of as such. No fact could proclaim more loudly the subordinate place the English-speaking nations have, until recently, given to educational psychology. Quite in contrast to this is the long list of books on this subject in German, embracing the names of Dittes, Imme, Maas, Pfisterer, Radestock, Beneke, Struempell, and scores of others dealing either with the general subject or with special phases of it. The French have likewise a long list of such works.

There is no history of education in this library. Quick's *Educational Reformers* and Browning's little book on the history of educational ideas, are the nearest. This is again a comment on the development of didactics among English and Americans.

The statement that there are no histories of education in all these thousands of books is not quite correct; there are two, both by Americans, but neither one distinctively English. Prof. Payne's translation of *Compayre* is, of course, French. Prof. Painter's *History of Education* is, according to the acknowledgment in the preface, based on Raumer, Karl Schmidt, and Dittes, in German, and Paroz, in French.

The inferiority of English and American literature on the subject of didactics is a result of their inferior schools, and in turn is no doubt part cause of that inferiority, for it is now very generally conceded that German and French schools are better than English and American, though the American school-system is by far the best in the lot. But a good system does not necessarily at once make good schools, though we believe that the quality of American schools is rapidly coming to the front.

A set of books the authorities of the Library prize highly is the enterprising work of another American; *Barnard's American Journal of Education*. This is a monument to the labor, self-denial, and pains-taking fidelity of a noble man, who worked on under every discouragement to furnish American teachers a literature of teaching. Dr. Barnard's *Journal*, from 1855 to 1873, is by far the most valuable set of volumes the library has.

There is a fair sprinkling of American books, besides the ones mentioned. Among these are Miss Brackett's *Education of American Girls*, and the book to which it was in some sense an answer—Dr. Clark's *Sex in Education*; Swett's *Methods*; Hall's *Bibliography*; Calkins' *Object-Lessons*; Youmans' *Modern Culture*; *Methods of Teaching History*, and a great many state reports, the only one from Indiana being that for 1867-'68.

Blackie & Son have brought out in England two books not as well known in America as they ought to be—Prof. Payne's *Contributions to Educational Science*, and Ham's *Manual Training*. These are both said to stand well here.

On the shelf of new books there are two which would interest many Indiana teachers: one Gladmon's *School Work*, published by Jarrold & Sons, London; the other, Prof. Bain's *On Teaching English*, published by Longmans & Co., London. Gladmon's

book is chock full of devices; it fairly bristles with "methods," many of them new to the editor of this department. Gladmon is an Australian school-principal, who has kept his eyes and ears open, and thus picked up a great deal of good teaching. Thus we see how the ends of the earth come together in didactics. Prof. Bain's new book on teaching English will meet a widespread call for some philosophic exposition of how to teach the mother tongue.

Of course the earliest English works on didactics are in the library, such as Ascham's *Schoolmaster*, Milton's *Tractate* on education, Locke's *Thoughts*, and the like. There are, besides, hundreds of little books and pamphlets, a hundred and fifty or two hundred years old. These sound very quaint now, and one is at once struck with their likeness to a certain class of recipe-books which have a sale in America. They tell the teacher exactly how to do it, or perhaps in many cases exactly how not to do it. Among these is a time-worn old book called "Coote's English Schoolmaster, Teaching all His Scholars, of What Age Soever." It is very amusing to look over this book, which labels itself "Perused and approved by publick authority; and now the four and fiftieth time imprinted, 1737." We are told in good big Old-English letters that this is "The most easy, short and perfect Order of Distinct Reading, and true Writing our English Tongue, that hath ever yet been known or published by any." Evidently the author had no squeamishness about advertising his wares, and he was no "coy maiden who didn't know what she wants," but "Edward Coote, Master of the Free School in St. Edmund's-Bury." Retailers of sure-enough devices, it seems, are not a modern invention confined to the rural districts in America and Australia! Just listen! "I assure all School-Masters of the English Tongue, that they shall not only teach their Scholars with greater Perfection; but also they shall with more Ease and Profit, and in a shorter Time, teach an hundred Scholars, than before they could teach forty. I hope by this plain and short way of Teaching, to encourage many to Read, who otherwise never would have learned; And so more Knowledge will be brought into the Land, and more books bought than

otherwise would have been," etc. If this is not a panacea when did we ever hear of one?

So far as one can find out Coote was the father of the *ba-be-bi-bo* system of teaching spelling. On the body of the pages we find that amaxing ringle-jingle by which our grandfathers learned spelling: *ab, eb, ib, ob, ub; ad, ed, id, od, ud, ac, ec, ic, oc, uc; ba, be, bi, bo, bu; ca, ce, ci, co, cu*, and so on down through the whole list of consonants, omitting only *g*, to "izzard." Not content with this infinite torture of common-sense, the rigmarole goes back and starts with *bab, beb, bib, bob, bub*, and canters contentedly through the list of consonants again. Then follow *scra, scre, scri, scro, scru*, and a whole army of ear-tormenters. This alphabetical inquisition ends with such unheard-of combinations as *ga, gad, gadl; sca, scab, scabl*; and this, mind you! for the purpose of teaching sane spelling!

On the margin of the wide page we find directions to the school-master—no school ma'ams those days. These directions are as funny as the work itself. "The Title of the Chapter must not be taught the scholar, but only the Teacher." Teachers could have had very little sense, judged by this. One at once wonders how the sturdy Englishman developed such a creditable literature, nurtured on such teaching as must come from imbeciles who are more childish than the children they teach. But again: "When your learner hath perfectly learned his Letters; teach him to know his Vowels; and after two or three days when he is skillful in them, teach him to call all the other letters Consonants; and so proceed with the other words of art as they stand on the Margin, never troubling his Memory with a new Word before he be perfect in the old." The writers on didactics of those days evidently did not trouble themselves about details.

The very first page ends up with a stanza which the young beef-eaters of this tight little island were supposed to learn:—

"If you do ill, fie on us all.
Ah, it is so, he is my fo.
Wo be to me, if I do so."

Here is another from right alongside of it:—

“Up, go on, I see a Py,
So it is; if I do ly,
Wo is me: Oh, I dy,
You see in me no lye to be.”

So, Father Coote appears to be not only the primogenitor of the *ba-be-bi-bo* mode of acquiring the mother tongue, but the positive inventor of Artemus Ward's spelling!

The *School Master* is a veritable *vade mecum*. Among its variety, it contains a compend of history, and the way things sacred and profane lie down together in this is fairly astonishing. For instance, the child is told that the same year Joshua brought the Israelites into Canaan, “Phaeton was burnt.” Phaeton, as any student of mythology will recollect, was the most cob-webbish of Greek heroes. At another place, we are told that Deborah and Barak judged Israel at the same time Orpheus struck the lyre in Greece.

There is no end to the amusing things of this quaint old reminder of the dominies of a bygone age, but there is an end to the space this letter must fill.

Right alongside of this library is a hall that has influenced America much more than this splendid collection of books—the Bayeux and Flemish tapestry rooms, out of which have come nearly all the designs which appear in the drawing-books, and it is also the suggestion which led to the colored work which had quite a prominent place in the exhibit at Chicago during the National Association.

This letter is somewhat patchy and fragmentary, but it is hoped it will be of some interest. S. S. P.

SOUTH KENSINGTON, Aug. 22, 1887.

METHOD is the hinge of business, and there is no method without order and punctuality.—*Hannah Moore.*

KNOWLEDGE and timber should not be much used until they are well seasoned.—*Holmes.*

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

GENERAL SUGGESTIONS.

I. CLASS MANAGEMENT.

STRIVE (1) to govern by the eye, not by the voice. Stand well back from your class so as to see every pupil. Have dull, backward, and restless boys in front. Separate the mischievous children.

2. Give as few orders as possible, but be firm in having them promptly and thoroughly obeyed when given. Try to impress children with the respect due to law.

3. Good discipline is impossible with children unemployed. Allow no waste of time in beginning.

4. Avoid speaking in a loud, blustering tone. Be ever on the alert, and warn when necessary. Do not scold, and never threaten.

5. Give careful attention to details. Know your pupils.

6. Never sneer at children. Be careful not to damp their natural ardor and gaiety.

7. Authority should be felt, not seen. The need for much punishment means, in nearly all cases, weak handling. If children are troublesome, look to yourself first.

II. TEACHING.

1. Distinguish clearly in teaching between the means and the end. In class teaching every pupil must receive individual attention.

2. Do not hurry; much good work is spoiled by being scampered over.

3. Try to make children think; do not rest content with loading the memory.

4. Do not waste time in long introductions. Recollect there should be a proportion of parts in every lesson.

5. Let your teaching be varied, not only to keep up interest, but that you may reach every pupil's mind by some means.

6. A good teacher is constantly a censor of his own work. Bear in mind that you are forming good or bad teaching *habits*.

7. Attention must be obtained principally by interest; it can not be secured by a mere exercise of authority.

8. Remember that the blackboard is a great help in nearly all lessons.

9. Learn to detect by the appearance of your class whether the children are in sympathy with and following you, or not.

10. Practice all the teaching devices, use none exclusively. Strive earnestly to attract sympathy and attention from your class. Interest the children, and endeavor to take every one with you.

III. 'ORAL' LESSONS.

1. Take care that you have a clear aim in view; remember these lessons should be especially educative.

2. Distinguish carefully between important and unimportant facts. Connect your information as much as possible with a few leading truths.

3. Avoid too wide a range; keep to the view you take so as to preserve the unity of your lesson.

4. Wherever you can do so, *without roundabout teaching*, question the facts from the children, group and summarize them.

5. Do not overload your lesson with facts; look to the sequence of your work; and avoid wandering from your subject.

6. Thoroughly illustrate your lesson. Compare and contrast objects when possible; discrimination of differences, and discovery of agreements, are valuable means of training.

—*School Management*, by JOSEPH LANDON.

THE TEACHER'S STUDY OF SELF.

MANY of the primary teachers of the state will this year enter upon the study of psychology in the Reading Circle. In view of that some suggestions are here made in regard to the study of mind. Psychology work ought to be a study of self, and not solely a study of the book. I do not mean by that, that the book is not a valuable aid in the study of psychology, but I mean that along with the study of a text there should go a constant and

systematic study of the actings of one's own mind. Psychology ought not to be studied as an isolated subject, but in relation to the thinking performed by teacher and pupil in the instruction in various branches. You may study it in the same way that you would study astronomy or chemistry; that is, just as a subject in itself, and it then has no direct and fundamental connection with the other subjects of the common schools. It ought to be studied in that way which will give the closest familiarity with the workings of your own mind and the minds of the children.

The only way a high degree of skill in this respect is reached is in the direct study of the soul, based on some good text as a guide. This good guide the Reading Circle has in Sully's Handbook.

In the renting of houses there is a sign that we frequently see, and upon it it says, "inquire within." That is the true line of work in the study of mind. Inquire within. Examine self. Let the principal line of work be that of introspection—a personal inspection of the activity of your own mind. In following the work of the book, you will find that certain positions are taken concerning the nature of mind and its activities. Three steps are to be taken by you as teachers studying mind,—

1. Your first step is to answer this question—What is the author's exact meaning here?
2. Your second step is to verify the fact in your own consciousness.
3. The third step is to raise the question—What bearing does this mental truth have upon the work in fractions; upon the work in geography; upon school government; or upon the work of teaching a new word? etc. Every teacher ought to be thoroughly imbued with the method indicated in these three steps. The teacher ought to be a consistent student of self in all lines when he is pursuing the work of psychology. There is one line of activity that very frequently occurs which affords an excellent opportunity for study. It is this: You will be thinking upon a certain point, and when you are not aware of it, you will find that the activity of your mind has passed off from that point, and you will find yourself considering another.

Then this question arises—How did your mind pass to this idea from that you were studying about? The student will carefully trace the steps in all such cases, and whenever they occur. This should be a fixed rule. This line of constant self-examination will greatly aid the study of the text in psychology. It also adds very much to the interest in the work.

Let us take an example: Once when looking upon a bird I noticed that in the wing there was the color yellow, and while I was dwelling upon that idea of color, I was surprised to find myself thinking about the assassination of Abraham Lincoln. The ideas seemed to be so entirely disconnected. Now when that phenomenon occurred it was incumbent upon me, in pursuing the study of psychology, to direct the minds of the children, and be able to base all school work upon mind action, to critically consider that phenomenon in my own experience, and trace it out and settle the question if possible. What was the mental connection between the idea of the assassination of President Lincoln and the yellow in the bird's wing?

This case must be studied in order to discover the law of all similar cases. I find that in examining the bird, sense perception acted and gave the color yellow. That was the first mental move. As my mind dwelt upon the color yellow, I thought of these things—the painting of a bird upon the side of a steamboat; the wings of the bird outstretched and yellow upon the wings. The boat was upon Lake Michigan, just upon the border of a large park in Chicago—Lincoln Park. The relation of the ideas was then clear, as was the mental law underlying their association.

From the name Lincoln Park the mind passed to the thought of the man himself, and the mind passed from that to the event in his history most deeply impressed upon me. And in that way, I must trace the movements of my mind, so that I shall be able to account for the fact that while looking upon a small bird and noticing the yellow in its wings I found myself thinking of the President of the United States—an idea that at first seems to be entirely disconnected. In this examination two truths concerning mind activity are discovered. One, that when any

element of a previous activity recurs the others tend to recur. The other, that the mind dwells upon that element that was previously most deeply impressed. The teacher's question is—What bearing do these truths of mind have upon the teaching of a new word, or a new number, or upon school management?

Every teacher has as every-day occurrences mental events involving just as many mental acts as the one given in the illustration. In every such case it is important that the teacher having traced them out, shall be able to see two things: 1. The phases of mental activity involved, as sense perception, memory, judgment, etc. 2. The fundamental law involved.

The fundamental principle here is—When once the mind enters upon a previous activity it tends to complete it; or, when *any element* of a previous activity recurs—as in this case the idea of the yellow in the bird's wing—all of the elements tend to recur. Case after case of this kind should be studied through introspection until the law is clear. That is one way that a teacher should make a personal of self and its activity.

Two ways then have been suggested for the study of self:

1. The study of views concerning the nature of self as given in a text-book on psychology. In this study three things are to be done:—

- a. Obtain the exact meaning of the author upon the point.
- b. Verify it in your own consciousness.
- c. Determine its educational bearing.

2. The study through introspection and memory of those acts of mind in which an idea seemingly out of relation to the thought you were engaged upon comes into consciousness. In this study three things are to be done:—

- a. Determine the various phases of mind activity involved in the calling up of the idea.
- b. Determine the underlying law.
- c. Decide upon the educational bearing.

Other lines in the direct study of self will be suggested in a future number.

THE primary teacher more than any and all others is a seed-sower. Be careful to use none but "good seed" in the "new ground."

METHODS IN READING.

THIS which is written at this time is written to primary teachers of the first year grade; or to every teacher in a school who is to have little children coming into the school for the first time and learning to read. Since that may happen in any country school, and a great many city schools, it is addressed to many. It has been well said in the *School Journal* for August, that method is a thing of principle, that it is essentially a group of principles, that it involves certain devices, illustrations, and questions, but that the devices, illustrations, and questions are not themselves the method. The thought was also there presented that these principles which become guiding lights in teaching a subject, are found, on one hand in the nature of the subject itself, by which the mind is to be educated, and on the other hand in the nature of the mind itself. Applying this idea when we seek the method in primary reading, it necessarily follows that the principles must be sought on the side of the subject itself, and then in the mind, especially in respect to those activities prominently employed in learning to read. When we turn our attention to reading as a subject, we find this as the first thought that may be taken as a principle of the subject—Reading has its two sides, namely, the *thought* side and the *form* or language side. The first thing to consider in regard to this thought is the relation of the two sides. In general the relation is this—the thought is the predominant element and the form is secondary. Or, another way to express the relation is—the form exists for the thought, i. e., the use of the form is to suggest the thought. It follows then that the oral expression exists for the thought and is not to be studied as an end, or if it is made an end it is a subordinate end. In other words, the oral reading that is done in school is mainly a means of determining whether the thought has been grasped. It is to a degree an end in itself, but the teacher is to regard it chiefly as an instrument by which to determine whether the thought in all its shades has been comprehended.

To so view it, and to so use it, is to conform to the principles above announced. And to employ it thus would give ample drill. In using oral reading as an instrument to determine whether the

thought has been obtained by the pupil, let it be supposed that the class is working with a given selection in reading. The first work is to lead the class to obtain the meaning as closely as possible, before the test of oral reading is employed. When questioning and other devices seem to indicate that the class have the thought, they are tested by being called upon to read it orally. If at any point the comprehension is vague and incomplete the oral reading discloses it. It is then the duty of the teacher to quietly turn the attention of the class to that point of the thought and work it out until it is clear and complete. The oral reading is then to be applied again as a test. The second oral reading may show that there is now a clear grasping of the point that was before vague, but it may also disclose a lack of understanding at another point in the thought. If so, the oral reading is as before to be laid aside and the attention of the class concentrated upon the point in the thought that the oral reading has shown to be not clear. When this point has been made definite the oral reading may again be applied as a test, etc. This is what is meant by saying that oral reading is to be used as an instrument for determining whether the class have grasped the meaning of the lesson, and it is obvious that in so using it ample drill in oral reading is given. (It is not meant that it will thus give sufficient vocal drill, as drill upon elementary sounds, volume, pitch, etc., but that to use oral reading as a test of thought will give enough exercise in *oral reading*, using that term in the usual sense.)

This conception of the relation of *oral* reading to *thought* reading grows out of this first principle of reading—*Reading has two sides, thought and form; the form being subordinate to the thought.* The teacher who sees this principle and the conception of the relation of oral to silent reading, that arises from it, has grasped two principles of method in reading. And method is a thing of principle. But the thought that reading has two sides, gives rise to another consideration. This is the consideration that the *form or expression is marked by law.* That is, the language side in reading has a certain definite law of correspondence of form and sound. Another way to state it is—*the expression side in reading exhibits an analogy of form and sound.* There are many

exceptions, it is true, but this is the general law of the English language. This law of *analogy of form and sound* may be seen in such groups of words as—*at, bat, cat, fat, hat, mat, pat*, etc.; *clear, hear, fear, near*, etc.; *blade, spade, shade*, etc.; *bog, cog, log, dog, fog, hog, jog*, etc.

Out of this law arises an important principle of primary reading, namely—*The power to master words as forms, is to be given through the law of analogy of form and sound.* That is, if the child is taught, in a group, *all, ball, call, fall, gall*, etc., he will know as a new word *hall, pall*, etc. This way of giving power over new words is in accord with the nature of the language. The negative consideration arising in view of this *law of analogy of form and sound*, is that diacritical marks are not to be employed in teaching the words in early reading work. To summarize:

The first thought obtained from reading as a subject is—

1. Reading has two sides—thought and form; form being subordinate.

a. Oral reading is to be employed mainly to determine whether the thought has been grasped.

b. To so use it will give ample drill in oral reading.

c. The form is marked by the law of analogy of form and sound. Hence:—

(1) The power to master new words is not to be given through diacritical marks, for they are arbitrary.

The teacher who comprehends this first thought of reading as a subject, and the subordinate thoughts in it, sees six of the principles of method in reading. And method is a thing of principle.

The other principles of method in teaching will be given in future numbers.

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

SPELLING.

THERE are many words that nearly every one will spell, but there are others so peculiar that if any one used common sense he would be sure to miss. It does very little good to make

fun of these words and the origination of them. They are with us and sometimes they must be spelled. It is the business of the teacher to see that the children know how to spell them. These are the words that must be studied. If a person spell the word enough *enough*, we laugh and say any one ought to know better than that. But how can he know better, if he has never learned any better? This word must be studied by ear and eye—more by eye. It is the business of the teacher to call attention to such words. Ask the pupil to spell the second syllable of this word. His attention is called to the peculiarity then. Have him write it, and give special attention to the *way it looks*. Do so with all words that he is liable to miss. Have him form a habit of looking for the peculiarity in things.

WHY WE FAILED.

It was once the custom to have children *say* the multiplication table "forward and backward." Then when the pupil was called on to multiply in doing an example he failed to do it readily, yet he could *say* the table as fast as he could talk. We were that child. Just why we failed the teacher said he did not see. Every one who ever learned a table that way knows what the inclination was when we came to something like *seven times nine*. We began to say to ourselves, "Two times nine are eighteen; three times nine are twenty-seven," etc., until we reached seven times nine. We had a great desire to say it "out loud" so we could hear it. Why did we do this? Because we had learned it so. "Mind tends to act as it has acted." This way of learning and reciting tables ought to be a thing of the past, but it isn't.

Teach these tables by *sight* principally. Why? Because it is through the sight that they are to be used principally. Suppose one is called upon to multiply 3974 by 7; he writes the number and the multiplier, and performs the multiplication silently, using only the eye to ascertain what is to be done.

Teach the numbers promiscuously, as that is the way they usually occur in examples to be solved. Teach a few well before taking others. Have these used in examples many times

before bringing in others. Thus, 7×2 , 7×4 , 7×3 , 7×5 , should be taught by placing them where they can be *seen*. Point to them and have the pupils give the result without saying "7-times 2 are 14." He simply *says*, or better, *writes* 14. Next prepare examples that have these combinations and no others. Use them so often that the child *could* not forget them if he would. Then teach more combinations, and present examples that have both the old and the new combinations. Thus proceed till all the combinations are learned.

HOW HELP A PUPIL.

A can build a fence in 4 days, B can build it in 3 days, and C in 2 days. If all work together how long will it take them?

A pupil solves this as follows: 4 days + 3 days + 2 days = 9 days, Ans. This is not an assumed case. The teacher laughs at the pupil and says, "Well, C can do it in 2 days himself, but when he has A and B working with him it takes 9 days!" The pupil now sees the ludicrousness of his answer, but he does not yet see how to solve the problem. It is barely possible that he is not in the best mental state to study it out. He may yet need some positive help. How shall it be given?

Call attention to some fact in the problem that he can get by an intelligent reading of it. Tr. How long does it take A to do the work when working alone? Pu. Four days. Tr. What part of it can he do in *one* day? Pu. One-fourth of it. Tr. If you knew how much each could do in a day, could you tell how long it would take *all* when working together? Pu. Yes, sir. But he probably said "Yes, sir," just because he thought he ought to. Do not be frightened or disgusted, or even discouraged if he presents the following as a solution: $\frac{1}{4} + \frac{1}{3} + \frac{1}{2} = \frac{1\frac{3}{4}}{1\frac{1}{2}} + \frac{1}{1\frac{1}{2}} + \frac{1}{1\frac{1}{2}} = \frac{1\frac{8}{12}}{1\frac{1}{2}}$, or $1\frac{1}{12}$ days, Ans. Now, don't make a great big saw-buck over this and send him away, unless you are certain that he *can* think it out himself.

Tr. What is the $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{2}$? Pu. What each can do in a day. Tr. You have found the sum of these *parts of the work* and called it *days*! Again he sees his mistake and probably says, "I didn't think." Possibly this is help enough. Probably, not.

Tr. How much of the work will they do if they work all day? Pu. $\frac{12}{12}$ of it. Tr. Will it take them more or less than a day to do it all? He is now probably able to finish. If he is not, ask him some more leading questions. Always aim to ask a question or make a suggestion that will lead the pupil to see some new relation to him. Don't do too much.

SHORT NOTES.

MARK TWAIN'S article on "English as She is Taught" should be headed English as She is Got by the Few. Those queer things—and many teachers have collections equal to his—do not represent the schools, but not more than a fourth of them, i. e., they were furnished by about 2 pupils in each school, or 4 in each hundred. It must be remembered that the teacher he refers to has been years making this collection. They are the product of the *exception*, but the *exception* comes to school and must be handled. So there is no objection to studying him through what he produces. But it is not fair to say *all* are like him, or to say that he was taught thus. Probably there are a few lawyers, doctors, or even editors and book-publishers who occasionally do *chuckle-headed* things, but one has no right to say that This is Law as She is Practiced, etc.

"TAKE CARE OF PENNIES, ETC."

"Take care of the pennies and the dollars will take care of themselves," is an old saying that every school teacher needs to consider—first, literally, and second, figuratively. There are few teachers who are not compelled to economize, and the above suggestion will help. But it is helpful, too, in school work. The *little things* make or ruin a school. A "good morning," a "thank you," a "well done," "right," "I like that," do much to create the proper spirit in a school. On the other hand the lack of these kindnesses and snappish words will spoil any school.

BY ENDINGS.

Teach children to add by endings. They should think that a number ending in 7 added to a number ending in 9 will give a number ending in 6, as readily as they think cat when they see c-a-t. $29 + 7$ he knows, instantly, must be 36.

DON'T SPELL "AT" A WORD.

Don't have a pupil spell *at* a word. It is worth much to know that we don't know. Let the pupil profit by this knowledge in spelling. Let him refer to the dictionary or his speller. Let him *look* at the word.

MAY I BE EXCUSED?

It was once, "May I go out?" The above is better. But why do teachers have a pupil—or even allow a pupil,—to put up his hand to ask permission to be excused? It is done this way: The pupil puts up his hand and keeps his eye on the teacher until he is recognized by the teacher. He then says, "May I be excused?" Why should he ask the whole school about it? Why not get up and quietly go to the teacher and ask privately? It is humiliating enough to have to leave the room. Besides, this plan would prevent any evil results occurring from a failure on the part of the teacher to see the uplifted hand. Where the teacher thought he was being imposed upon it would enable him to ask some questions that he would not care to ask in hearing of the school. Think about this. Excuse too often rather than make a mistake on the other side.

FOR OPENING EXERCISES.

"My little children, let us not love in word, neither in tongue; but in deed and in truth"—I John, iii, 18.

WHICH LOVED BEST?

"I love you, mother," said little John;
Then, forgetting his work, his cap went on,
And he was off to the garden swing,
And left her wood and water to bring.

"I love you, mother," said rosy Nell,
"I love you better than tongue can tell."
Then she teased and pouted full half the day,
Till her mother rejoiced when she went to play.

"I love you, mother," said little Fan;
"To-day I'll help you all I can.
How glad I am that school doesn't keep!"
So she rocked the babe till it fell asleep.

Then, stepping softly, she brought the broom,
And swept the floor, and tidied the room ;
Busy and happy all day was she,
Helpful and happy as child could be.

"I love you, mother," again they said—
Three little children going to bed.
How do you think that mother guessed
Which of them really loved her best?

COUNTRY SCHOOL DEPARTMENT.

[Conducted by W. H. CAULKINS, Supt. Tippecanoe County.]

TARDINESS.

WE asked a teacher, last winter, what he did to prevent tardiness? "I don't have any," he answered. "How is that? Surely your pupils are not all there every morning by nine o'clock?" "No, sometimes they don't get in till 9.30." "Then they are tardy, and you should count them so." "No, for they always try to be there on time, and when it is not their fault, they are not tardy."

Well, he was both right and wrong. It is the spirit of the pupil which determines, and should determine to a large extent, whether any act of his is right or wrong. Truly, if he tries faithfully to be on time, yet through no fault of his, is late, he deserves some credit; while, if he plays along the road and reaches the room just as the bell taps the last stroke, he deserves no credit. In so far as the intention of the child is concerned, he is deserving or not of credit, not according to what he does, but to what he tries to do.

But the teacher mentioned above was wrong for all this. It matters not what my intention is, if I am not at the depot in time, the train goes and I am left. If the pupil is not in his seat when the given time arrives, he is most certainly tardy. It may be his misfortune and not his fault, but he is tardy and should be marked tardy.

Now, all this applies peculiarly to the country, where there is more excuse for tardiness than in the town or city. Bad roads, bad weather, long distances, home work, all are working in opposition to the schools and must in some way be counteracted. The most logical plan of punishment, perhaps, is that of keeping the pupils in as many minutes as they were tardy. But we have seen this plan, as well as all others, utterly fail to *prevent* tardiness, and this is the end we desire to reach. What can be done? The only efficient remedy is the universal one—destroy the cause and the effect will cease to be. If it is carelessness, or lack of energy, spur them up a little by making the work more interesting and by a few good talks on the subject. Do not be always preaching or scolding, however. If home-work or bad roads or bad weather, is the cause, call on the parents just before supper-time, stay and have a good long talk, gradually working around to the tardy question, and if you are skillful you can remove this cause. If it is pure maliciousness on the part of the pupil, and, sad to say, it sometimes is, punish him severely; but in this as of all the causes, be *sure* you are right. Recollect, finally, your aim is not to get the pupils to the school-house in time that the register may be free from tardy marks, but that the pupils may form the habit of punctuality.

It has been noticed that tardiness as well as irregular attendance, runs in families. The same remarks apply to irregular attendance as apply to tardiness. *Remove the cause and the effect will necessarily cease to be.*

FRIDAY EXERCISES.

WHAT have you planned to do Friday afternoon? We like the old-fashioned plan of recitations and compositions and dialogues. With what fear and trembling we used to march out and say our little piece, and how well we were pleased when our audience cheered. We knew as well as any old experienced speaker when we had made a hit. Does it not give the pupil self-command and self confidence in that most trying of situations—standing before a crowd, the centre of all eyes? Would we compel the pupils to perform? No, but we would make it

so interesting that all would perform willingly and cheerfully. Would we permit the pupils to choose their own selections? Yes, to some extent. But if they choose silly jingles or elaborately finished extracts, we would have something better to put in place of it. Have a good lively dialogue occasionally. One or two exhibitions during the term, if not permitted to consume too much time in preparation, will awaken enthusiasm.

PRESERVE YOUR WORK.

WHY not have some of the best work of the school preserved for the inspection of visitors? Say once a month, have each class in arithmetic write neatly the solutions of five or ten problems chosen from the work of the month. Have some of the language work copied in the same way. Let pupils draw a given map carefully. History outlines, reading papers, compositions, physiology sketches, drawings of leaves and flowers, drawings of objects, pictures of number problems, specimens of penmanship. samples of all the work of the school would and should form a most interesting volume showing the progress of the school. Legal cap paper is the most convenient, perhaps, to use, and when stitched through the top would make a lasting book which could form part of the school library. Such a record would be of much value to teachers, pupils, and the district generally.

SECURE THE CO-OPERATION OF PARENTS.

THE teacher should encourage and seek frequent social intercourse with the parents whose children are in his school. He should embrace every opportunity, informally, to talk with them kindly and earnestly about the progress and welfare of their children. The way to a father's or mother's heart is through their children. The teacher should visit, if possible, every family in the district. By so doing he indicates that he seeks to become "one of them." A proper social influence is a powerful lever in managing a country school. Be ever ready to explain the plans and methods of the modern school. A majority of the parents do not visit their schools—have not been in one since they left

school twenty or thirty years ago—and when they think of school their thoughts naturally revert to the ones they last attended. Is it strange that some patrons should criticise the “new-fangled notions”? The teacher should be frank in all his relations to the parents. Genuine merit needs no concealment. Show that you are competent, and willing to make sacrifices, in your efforts to do good work.

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another; we can't do it. We will change as often as asked to do so, but must be notified of each change.

SELECT STORIES FOR OPENING EXERCISES IN SCHOOLS, by Geo. F. Bass, of Indianapolis, is proving a marked success. It is just what many teachers have been looking for, and many are gladly sending the price (\$1) and getting the book post-paid by mail.

THE INDIANA STATE TEACHERS' ASSOCIATION will hold its next meeting December 28, 29, and 30, at Plymouth Church, Indianapolis. The program is reaching completion; it bids fair to be an interesting one. The committee have determined to secure one eminent popular lecturer to give the “annual address” on Thursday evening. This will be a free lecture, and no teacher can afford to miss it.

THE UNIVERSAL LANGUAGE.—Count von Moltka, says the *Pall Mall Gazette*, lately expressed his belief that “Volapuk,” the universal language, has a great future before it; and it has been learned and is being studied by an enormous number of persons on the continent. Last winter more than 2,000 pupils received instruction in the language in Vienna alone. It is claimed that “Volapuk” is so simple that it can be learned in ten lessons. There is now published at Vienna a “Volapukagased,” which claims to have a large circulation.

SLIGHTLY OFF.

The Reading Circle Board report that the examination papers this year are much superior, on the whole, than for previous years, and especially is this true on the subject of mental science.

Prof. Boone, who has had charge of this special line of work, expresses himself highly pleased at the improvement in the mental science papers. He takes it as proof positive of substantial progress in this important department.

While the above is entirely true, it is also true that some persons have been engaged in this important study and have attempted to pass the examination, who evidently have not "touched bottom," and are therefore a little "off" in their answers, as evidenced by the following selected answers:

"If my memory reverberates to a certain day in the school term I will likely remember the scholars who were present."

"The four primary laws of memory are: (1) Gain the knowledge; (2) recall it; (3) have a conception of it; (4) recognize it."

"To learn the pupil to get the right expression."

"The characteristics of conversation is the subject of which we converse."

"When our whole attention is upon any one subject, our whole mind must be upon the same. We can not give attention to any subject unless some of our mind is upon it."

"Capacity of mind is the development of it, and it may be increased."

"We may fix attention on a subject by liking to study the subject."

"It is unfortunate for a fine genius to be associated with a weak memory."

"This (examination in Watts) is murder in first degree!"

"Evidence is possessed authority that something is."

SHOULD TEACHERS BE GIVEN NOTICE OF DISMISSAL?

RESPECTED JOURNAL:—I do not agree with your statement that "In cities and towns it is the duty of the school board to give such teachers and superintendents as are not to be re-elected, ample notice that they may resign." If the rule of notifying and resigning becomes general then a "stigma" will be attached to every resignation, for no one will be able to discriminate between the real and the make-believe resignation. It may be hard for a teacher to lose his place, but it should be doubly hard for him to have to resign and give friends a plausible reason for so doing when he feels that the truth requires him to say "I resigned because I was notified that I would not be re-elect-

ed." A teacher who would rather sail under false colors than bear "the stigma of a dismissal" must be wanting in more than one requisite of a good teacher. How can we teach truth if the truth be not in us?

A "dismissal" might or might not be a "stigma" if the cause was known.

I think that in the re-election of a superintendent the school board should be guided by the efficiency of the work, and in the re-election of teachers they should be guided by the superior knowledge of the superintendent, for he has greater opportunity to judge of the thoroughness of the work. If the builder is to be judged by the building he should be allowed to choose his timber. If a superintendent does not wish a teacher to be re-elected he should furnish the school board with a record showing the teacher's successes and failures and containing his reasons for the dismissal. A copy of this record should be given to the teacher. Then the teacher would know why he was dismissed, which might be invaluable to him in preventing a repetition of the errors. A correct record would also be of value in fitting the teacher to the right place, for the qualifications that one superintendent might reject another might desire. If the school board dismiss a superintendent they should give him a similar record. Most school boards would, if asked, give friendly aid through courtesy, but the teacher who feels the satisfaction of conscientious discharge of duty should not be obliged to receive as a favor what belongs to him as a right.

EUGENIA HALE, *La Porte, Ind.*

GEMS OF THOUGHT.

"The great public schools,
May their influence spread
Till statesmen use grammar
And dunces are dead!
Till no one dare say
In this land of the free
'I done' for 'I did,'
Or 'It's her' for 'it's she.'"

"If wisdom's ways you'd wisely seek,
Five things observe with care;
Of whom you speak, to whom you speak,
And *how*, and *when*, and *where*."

Reading without purpose is sauntering, not exercise. More is got from one book on which the thought settles for a definite end in knowledge, than from libraries skimmed over with a wandering eye.—*Lord Lytton*.

Profaneness is a low, groveling vice. He who indulges in it is **no** gentleman. I care not what his stamp may be in society,—I care not what clothes he wears or what culture he boasts,—despite all his refinement, the light and habitual taking of God's name in vain betrays a coarse nature and a brutal will.—*E. H. Chapin.*

Education is a better safeguard of liberty than a standing army. If we retrench the wages of the schoolmaster, we must raise those of the recruiting sergeant.—*Edward Everett.*

No man can safely go abroad that does not love to stay at home; no man can safely speak that does not willingly hold his tongue; no man can safely govern that would not cheerfully become subject; no man can safely command that has not truly learned to obey; and no man can safely rejoice but he that has the testimony of a good conscience.—*Thos. A. Kempis.*

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR AUGUST.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The handwriting of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

SCIENCE OF TEACHING.—1. Name any work on education which you have studied, and state some of the views presented that most impress you.

2. In the construction of public school buildings, what particulars should receive chief attention?

3. Which do you regard the more important, and why, oral spelling or written? Oral reading or silent?

4. Name the five senses, and tell what direct knowledge of an organ could be acquired by the exercise of each sense.

5. If the head of a barrel be struck and one determine, from the sound, that the barrel is empty, what faculty of mind is chiefly exercised?

U. S. HISTORY.—1. Give an account of the Mound Builders, mentioning some evidences of their advancement in civilization, some

proofs of their antiquity, and giving the location of some of their principal mounds.

2. In what part of the present territory of the United States were settlements made by the Swedes? What became of these settlements?

3. Give an account of Perry's victory.

4. Give an account of the assassination of Lincoln, and state what effect it had upon the affairs of the country.

5. Mention five of the most important events in Grant's administration. Give reasons for considering them important.

GEOGRAPHY.—1. Bound Alabama; locate its capital and its metropolis.

2. Explain the peculiarities of twilight in the tropics. On what do these depend?

3. Compare the climate of England with that of Indiana.

4. What are the chief exports of Cuba?

5. Describe the course usually followed by a steamer from New York to Liverpool.

6. Name the five chief seaports of the United States on the Gulf of Mexico.

7. What is the form of government of Mexico?

8. What is the cause of the rapid growth of Minneapolis?

9. Name in order the states of the Union which have a population greater than that of Indiana.

10. Name in order the six largest cities in Indiana. In what part of the state is each?

ENGLISH GRAMMAR.—1. Name five ideas that may be expressed by the adverbial clause, and write an example of each.

2. What are the classes of sentences in regard to form? Define each class.

3. What may be used to fill the office of the noun? Give an example of each.

4. What are the distinctions between the interrogatives *who* and *which*?

5. Write sentences in which *when* has adverbial uses. (*a*) In two clauses; (*b*) in but one.

6. What is meant by the person of the verb?

7. What is the distinction between the subjunctive and the potential mode?

8. Analyze: *The law of God he shall fulfill both by obedience and by love.*

9. Parse the italicised words in the last sentence.

10. Correct, giving reason for the corrections: (*a*) *He was most dead, but is some better now.* (*b*) *Who did he speak of, he or I?*

- ARITHMETIC.—1. Reduce $\frac{3}{8}$ to a decimal, and give principle. 5, 5-
2. A bank with \$50,000 capital made \$9,500; its expenses were \$3,600; it declared a 10% dividend; what could it carry to surplus? 5, 5-
3. A man man decanted a pipe of wine containing 70 gals., $\frac{1}{4}$ in bottles, 6 to a gal., the remainder in bottles 5 to a gal.; how many bottles in all? 5, 5-
4. A bought the s. w $\frac{1}{4}$ of n. w. $\frac{1}{4}$, and the n. w. $\frac{1}{4}$ of s. w. $\frac{1}{4}$ of a section of land at \$5 an acre; what was the shape of the piece, how many acres in it, and what did it cost? 4, 2, 2, 2-
5. If two or more digits in any number be changed as to relative position, the difference between the original and the changed numbers is always divisible by 9. Why is this so? 10.
6. A merchant bought cloth marked \$5 a yard at a discount of 20%; he was allowed on this 12% off for cash, and sold the cloth for \$7 per yard; what % of profit did he make? 5, 5-
7. If 2 parallel lines 8 ft. long are 6 ft. apart, and the ends be joined by lines crossing in the middle space, what will be the area of a triangle having one of the lines for a base? 5, 5-
8. What is the cube root of $\frac{3}{4}$ of $\frac{9}{12}$ of $\frac{2}{3}$? 5, 5-
9. A sold a lot for \$3,000, $\frac{1}{3}$ cash and the remainder equally in one and two years, with 6% interest; he discounted the notes at 8% at once; how much did he get for his lot? 5, 5-
10. Exchange on Paris at New York is 5.25 fr. to the dollar; at Paris on Berlin is 1.25 fr. to the mark: how many marks on Berlin can be bought through Paris at New York for \$1,000? 5, 5-

NOTE.—Answer any seven. Fifteen % off for each one incorrectly solved.

READING.—1. What are synonyms? Explain the difference in meaning of the following words: Chief, commander, leader, general.

2. Compose a sentence in which any one of them could be correctly used; and then compose two sentences in which the words can not be interchanged.

3. "I never was a man of *feeble courage*. There are few scenes of either human or elemental strife upon which I have not *looked with a brow of daring*. I have stood in front of the battle when the swords were *gleaming* and *circling* around me like fiery serpents in the air. I have seen these things with a *swelling* soul, that knew not, that *recked* not danger. But there is something in the thunder's *voice* that makes me tremble like a child."

Rewrite the quotation, substituting equivalents for the italicized words.

4. What is meant by "human strife?" What is meant by "elemental strife?" What figure of speech is "with a brow of daring?" What figure of speech is "the thunder's voice?" Express the idea, "with a swelling soul," in simple language.

3. Pardon, temporal, worldly, remission, accuse, unite, arbitrary, arraign, despotic, accomplish; from these words select two synonyms to each of the following words:

1. Forgiveness. 3. Effect.
2. Impeach. 4. Secular.
5. Absolute.

6. Why should an easy style of reading be cultivated? Give two directions for acquiring it.

7. When are words used in a literal sense? When in a figurative sense? Illustrate both uses of the same words.

(15% off for each one incorrectly answered.)

PHYSIOLOGY.—Discuss the following topics:—

1. *The Pulse*: What is it, and why is it an indication of the physical condition?

2. *The Cerebro-Spinal Nervous System*: Of what organs composed? Special structure of each organ? Special function of each organ?

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. Of the Mound Builders, little or nothing is positively known. Conjecture makes them, on one hand, the ancestors of the Indians, and on the other regards them as a distinct people. Their remains seem to confirm the latter opinion. In North America there are the remains of earth structures of various shapes, round, square, and polygonal. From these remains it would seem that they had a higher knowledge of elementary science, were in more advanced stages of civilization, as they have left the remains of various implements of more perfect character than those amongst the Indians; they evidently lived a settled, not a roaming life, and have even shown a knowledge of the principles of fortification; their appliances for daily use were more varied and convenient. In South America, where higher evidences of civilization are found, the remains point to a different and eastern origin. The remains of the Mound Builders are more numerous in the Ohio and Mississippi Valleys,—especially on the eastern slope.

2. Principally in Delaware, but also in southeastern Pennsylvania. Their colonies were merged into the grant of Penn, Delaware by a grant from the Duke of York, and Pennsylvania by the grant of King Charles.

3. The British, after Hull's defeat, were in possession of Michigan, from which it became necessary to dislodge them. Com. Barclay, commanded the British fleet, and after the defeat of Lawrence was exultant. Perry, in command of the American vessels, lay in Put in Bay, when he was made aware of a challenge to a sea fight with Bar-

clay by a "Sail Ho!" from the masthead of his vessel, the *Lawrence*. Bringing out his war flag, with Lawrence's last words on it, "Don't give up the ship," he mounted a cannon and asked his men whether it should be raised. They said yes, and cheered, the cheers being answered from the other vessels. The fleet sailed out, and in three hours, after one of the hardest fought naval battles on record, Perry wrote his celebrated laconic dispatch to Harrison, "We have met the enemy and they are ours." The British blew up their works at Detroit and retired to Canada.

4. A few days after the surrender of Lee, when the whole country north was rejoicing over regained peace, Lincoln with his wife went to Ford's Theatre, in Washington. During the performance Wilkes Booth, an actor, entered the rear of the box and shot the President, jumped upon the stage, crying, "Sic semper tyrannis," and escaped. The President was taken to a house near by, where he died in a few hours. By his death, the presidency devolved upon Andrew Johnson, between whom and Congress radical differences as to reconstruction existed. On the whole, the South were so indignant that a crime so great should have been committed in their name, that the sense of defeat was materially softened; while in the North, it led to a desire for harsher methods. To the wise, prudent, and manly views of Grant, the country is indebted for a safer, more rapid, and wiser settlement of the troubles than at one time seemed possible.

5. (1) The Alabama claims, settled at Geneva. It restored peace and harmony with Great Britain, and showed the world that great nations could act in great affairs without war.

(2) The settlement of the Fishery question, in which the United States were required to pay instead of Great Britain,—important for the same reasons as the first.

(3) The Centennial Exhibition at Philadelphia—showing, as never before, the essential unity of interest pervading all civilized nations.

(4) The perfect restoration of the Union by readmission of the remaining Secession States, making the objects of the war a perfect success, and restoring peace at home.

(5) The wonderful progress made in the eight years of his administration in commerce, discoveries in science, and manufactures—showing a realization of the claims of peace in the minds of the people.

READING.—1. Synonyms are words having the same or very nearly the same meaning. *Chief* (Fr. *chef*, Lat. *caput* = head) signifies primarily the one of most importance; *commander*, one having authority to direct; *leader*, one taking the front position in any movement or enterprise; *general*, one holding a certain rank of relative importance in an army.

2. *a.* The general, unsheathing his sword, urged his men to one more brave charge upon the enemy. *b.* As the chief waved his hand, silence fell upon the braves who had assembled in the council. The position he held was that of general, not that of colonel.

3. I never was a man of irresolution. There are few scenes of either human or elemental strife upon which I have not gazed with a spirit of defiance. I have stood in the front of the battle when the swords were flashing and whirling round me like fiery serpents in the air. I have seen these things with a rising soul that knew not, that regarded not danger. But there is something in the thunder's tones that makes me tremble like a child.

4. *a.* Strife between human beings. *b.* Strife between the elements or of the elements. *c.* Metonymy. *d.* Personification. *e.* With a soul whose courage rose as the danger increased.

5. *a.* Forgiveness: pardon, remission.

b. Impeach: accuse, arraign.

c. Effect: accomplish.

d. Secular: temporal, worldly.

e. Absolute: arbitrary, despotic.

"Unite" is not a synonym for any of these.

6. Because of the pleasure to the reader and to others, and of the ready interpretation of thought. Practice, practice; under wise and encouraging criticism.

7. Words in their ordinary signification are said to be "literal"; words used to convey some other idea than that of ordinary speech are said to be "figurative." Examples: The lion was seen lashing himself and preparing for the fray. He was a lion in the fight.

PHYSIOLOGY.—1. At each systole of the heart a wave of blood is sent along the arteries. Place the finger upon the large artery of the opposite wrist; the crests of the wavelets make successive "beats" against the finger: these beats are termed the "pulse," *i. e.*, the impressions due to the pulsations of the heart. It is not necessarily an indication of our physical condition, for, while the normal pulse beat about 70 per minute in the adult of middle life, persons have been healthy with a pulse as low as 60 or as high as 80. Any unusual and continued increase or decrease of the ordinary pulse-rate is generally due to disease, however, and may be looked upon as a warning.

2. The cerebro-spinal nervous system is composed of the brain (large and small) the *pons varolii*, the medulla oblongata, the spinal cord, and the various small nerve fibres proceeding from and terminating in these organs. The brain is composed of white and gray matter the gray upon the outside; the spinal cord of gray and white matter, the white upon the outside; the nerve fibres are generally of white matter. The originating centers of nerve force are composed of cells. The large brain is principally the organ of thought and sensation; the

small brain the regulator of motion and locomotion; the other organs are chiefly concerned in the transmission of volitions or impulses to or the reception of impressions from the various sense-organs, etc.

SCIENCE OF TEACHING.—I. Fröbel's Education of Man. That the child is essentially good, and that it is the business of the teacher to develop the good in his nature.

2. Light and ventilation. The light should be admitted from the back and left of the pupils. There should be provision made for fresh air to come in and for foul air to go out.

3. Written spelling, because 99% of the spelling in practical life is written spelling. Silent reading, because it is by silent reading that we gain most of our knowledge from books, and because it is the basis of oral reading.

4. Seeing, hearing, smelling, tasting, touch. Seeing, color; hearing, smelling, odor; tasting, flavor; touch, size and shape.

5. The judgment.

GRAMMAR.

1. a. Time; as, I was at the landing, *when the vessel arrived*.
 b. Place; as, I visited the spot, *where the battle was fought*.
 c. Manner; as, The engineer explained *how the accident was averted*.
 d. Cause; as, The pupil could not tell *why he inverted the divisor*.
 e. Degree; as, *However much he tries*, he will not succeed.

2. A simple sentence expresses a single thought and contains but one proposition; as, Thoughts rule the world. A complex sentence contains one principal sentence, and one or more subordinate clauses; as, the man who does the best that he can, deserves praise. A compound sentence consists of two or more simple sentences, or two or more complex sentences; as, 1. Be wise to-day; 'tis madness to defer. 2. As Caesar loved me, I weep for him; as he was valiant, I honor him; but as he was ambitious, I slew him.

3. Any word, phrase, or clause may fill the office of the noun.

1. A word; *Why* is an adverb. 2. A phrase; *To become a scholar* requires much study. 3. A clause; I know *that my Redeemer liveth*.

4. The interrogative *who* is used of persons only. The interrogative *which* is applied to both persons and things, and asks for one out of a number.

5. (1) *When* Cæsar arrived in Gaul, he enrolled two new legions. In this sentence *when* modifies both *arrived* and *enrolled*. (2) *When* shall I receive my certificate? In this, *when* modifies *shall receive*.

6. In some cases the verb takes an ending to suit the form of the pronoun or other word used as the subject; as, I *go*, thou *goest*, he *goes*; we, you, or they *go*, the boy *goes*, the boys *go*. For this reason person is called a property of verbs.

7. The *potential mode*, as the name indicates, implies power, possibility, necessity, etc.; as, I *can* write a letter, I *must* finish my work, the pupils *may* have recess, etc. The potential mode may be used in both independent and dependent statements. The *subjunctive mode* is used to express merely what is conceived in the mind as doubtful, and particularly in conditional clauses to imply that the statement in the supposition is contrary to fact; as, O that I *knew* where to find him; If he *had been* a minute later, he would have lost his place; It *were* useless to resist, etc. The subjunctive mode is always dependent on some other verb, expressed or implied.

8. This is a simple sentence. *He* is the subject nominative, unmodified. The predicate verb is *shall fulfill*, modified by the object complement *law*, and by the compound adverbial phrase of manner, *both by obedience and by love*. The noun *law* is modified by the article *the* and the prepositional phrase *of God*.

9. *Law* is a noun, common, neuter, third, singular, object of *shall fulfill*. *God* is a noun, proper, masculine, third, singular, object of the preposition *of*. *Shall fulfill* is a verb, regular, transitive, active, indicative, future, and third singular to agree with its subject *he*. *Obedience* is an abstract noun, neuter, singular, object of the preposition *by*.

10. (a) He was *almost* dead, but he is *somewhat* better now. (b) *Whom* did he speak of, *him* or *me*? or, Of whom did he speak? etc.

GEOGRAPHY.—I. Alabama is bounded on the north by Tennessee; east, by Georgia; south, by Florida and the Gulf of Mexico; west, by Mississippi. Its capital is Montgomery, situated southeast of the centre of the state, on the Alabama River. Mobile, the metropolis, is in the southwestern part of the state, at the head of Mobile Bay.

2. Within the tropics, the duration of twilight is comparatively short, and increases towards the poles. Twilight ends where the sun sinks 18° below the horizon; hence its length at different seasons and in different latitudes is dependent upon the time required for such sinking.

3. The mean annual temperature of England and Indiana is about the same, but the climate of England is more uniform than that of Indiana, which is liable to sudden and extreme changes.

4. Sugar, tobacco, coffee, molasses, honey, oranges, pine-apples, rum, and ornamental woods; as mahogany and ebony.

5. Down New York Bay, then following a course to the northeast, along the path of the Gulf Stream. Vessels usually touch at Queens-town on the south coast of Ireland, then sail through St. George's Channel and the Irish Sea to Liverpool, at the mouth of the Mersey River.

6. New Orleans, Mobile, Galveston, Pensacola, Key West.

7. Republican.

8. To several causes: healthfulness of climate, beauty of situation, the possession of good water-power for manufacturing, and excellent commercial facilities, by river and by railroad.

9. New York, Pennsylvania, Ohio, Illinois, Missouri.

10. (1) Indianapolis, in the central part; (2) Evansville, in the southwestern part, on the Ohio River; (3) Warrick, in the north-eastern part; (4) New Albany, in the southern part, on the Ohio; (5) La Fayette, northwest of the centre, on the Wabash; (6) Terre Haute, in the western part, on the Wabash.

ARITHMETIC.—1. $\frac{3}{4} + \frac{1}{4} = 1$, or .9. Annexing decimal ciphers to the numerator and dividing by the denominator changes the form but not the value of the fraction.

2. \$9500, gain—\$3600, expenses=\$5900. 10% of \$50000=\$5000, dividend. \$5900—\$5000=\$900, surplus.

3. $\frac{1}{4}$ of 70 gal.=50 gal. 50×6 bottles=300 bottles. $\frac{2}{3}$ of 70 gal.=20 gal.; 20×5 bottles=100 bottles. 300 bottles+100 bottles=400 bottles.

4. $\frac{1}{4}$ of $\frac{1}{4}$ = $\frac{1}{16}$ section. $\frac{1}{16} + \frac{1}{16} = \frac{1}{8}$ section, or 80 A. $80 \times \$5 = \400 .

Ans. $\left\{ \begin{array}{l} \text{Form=twice as long as wide.} \\ 80 \text{ A.} \\ \$400. \end{array} \right.$

6. 20% of \$5=\$1, discount. 12% of (\$5—\$1)=48¢; \$4.00—48¢=\$3.52, cost. \$7, selling price,—\$3.52, cost,=\$3.48, gain. $\$3.48 \div \$3.52 = 98\frac{1}{2}\%$, Ans.

7. $2 \left(\frac{2.5 \times \text{altitude} \times 4 \text{ feet base}}{2} \right) = 10 \text{ sq. ft., area.}$

8. $\frac{3}{4} \times \frac{2}{1} \times \frac{2}{3} = \frac{1}{2}$; $\frac{1}{2} \times \frac{1}{2} = \frac{1}{4}$. Ans.

9. $\frac{1}{3}$ of \$3000=\$1000, cash. \$3000—\$1000=\$2000.

$\frac{1}{2}$ of \$2000=\$1000, face of each note.

.0605 of \$1000=\$60.50, interest.

\$1000, face+\$60.50, interest,=\$1060.50, amount discount.

.0605 of \$1060.50=\$64.16025, discount at 6%.

\$64.16025 dis. at 6%+\$21.38675, dis. at 2%=\$85.547 dis.

\$1060.50, am't dis.—\$85.547 dis.=\$974.953, proceeds first note.

.1205 of \$1000=\$120.50, interest.

\$1000, face,+\$120.50, interest,=\$1120.50, amount discount.

.1205 of \$1120.50=\$135.02025, discount at 6%.

\$135.02025, dis at 6%+\$45.00675, dis. at 2%=\$180.027, dis.

\$1120.50, am't dis.—\$180.027 dis.=\$940.473, proceeds.

\$1000, cash,+\$974.953, pro.+ \$940.473, pro.=\$2915.426, Ans.

(This answer is true, if notes were discounted at a bank.)

10. $1000 \times 5.25 \text{ fr.} = 5250 \text{ fr.}$ $5250 \text{ fr.} + 1.25 \text{ fr.} = 4200 \text{ marks, Ans.}$

“ENGLISH AS SHE IS WROTE,” by a County Superintendent:—

“At 10 A. M. * * * the institute will be organized, and we should have every teacher present at that hour and remain all the week.”

“Let every teacher come prepared to join the circle * * * that our reports * * * will not unnecessarily be tardy.” “Urge the patrons of schools and friends to attend, etc.”

Paper: “A few faults and their remedies, of our schools.”

DEPARTMENT OF QUERIES AND ANSWERS.

This Department is conducted by J. C. GRAGG, Superintendent of the Brazil School.
Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

[23] A wishes to inclose a lot which shall be 10 rods longer than wide, and contain 6216 sq. rds. What will be its dimensions? By arithmetic.
S. W. P., *Rego, Ind.*

[24] If 12 oxen eat $3\frac{1}{2}$ acres of grass in 4 weeks, and 21 oxen eat 10 acres in 9 weeks, how many oxen can eat 24 acres in 18 weeks, the grass growing uniformly?
W. T. EFURD, *Pittsburg, Texas.*

[25] It is said that David R. Atchinson was for one day President of the United States. Explain.

EDWIN S. MONROE, *Farmersville, Ind.*

[26] On which bank of the Missouri River is Kansas City situated?
A TEACHER, *Vandalia, Ind.*

[27] A man died February 14, 1844, aged 44 yrs., 2 mo., 14 da. When was he born?
H. D. NICEWANGER, *Landess, Ind.*

[28] The frustum of a cone of revolution whose altitude is 20 ft., and the diameter of its bases 12 ft. and 8 ft., is divided into two equal parts by a plane parallel to its bases. What is the altitude of each part?
RABENF.

[29] What is the diameter of a circle when the sine of a certain angle is 20 ft. and its versed sine 2 ft?

DE LA COFFEE, *Spenser, Ind.*

[30] Solve No. 5, page 227, Ray's New Higher Arithmetic.

ALBERT SPILLMAN.

[31] Where was Robert Fulton buried, and what was the cause of his death?
Id.

[32] Solve No. 8, page 212, Ray's New Higher Arithmetic.

F. D. A.

[33] What are the capitals of Dakota Territory, Louisiana, and West Virginia?

ANNA MOORE, *Andersonville, Ind.*

[34] The apples are hard to gather. Analyze.

C. E. ROBINSON, *Edinburg, Ind.*

[35] What was found in the bullet which the messenger so hastily swallowed when captured by Governor Clinton?

MILLA BAIRD, *Valparaiso, Ind.*

ANSWERS.

[12] The following solution did not reach us until too late for publication, but it is so fine we give it in full. This solution alone is worth the price of the Journal for a year. ED.

Let $a = 40$ ft., the height of lower house.

$d = 50$ ft., the height of higher house.

$b =$ distance of foot of ladder from lower house.

$c =$ distance of foot of ladder from higher house.

Then the square of a plus the square of b must equal the square of c plus the square of d . The square of a is 900 less than the square of d ; so the ladder must be placed near enough to the taller building to make the square of c 900 less than the square of b . If the ladder be in the middle of the street, the square of b and c will be equal; but for every foot the ladder is moved toward d we increase the difference of the squares of b and c just 80. Now if one foot increase the difference 80, we must move the ladder as many feet as 80 is contained times in 900, or $11\frac{1}{4}$ ft., toward d . But 20 ft. and $11\frac{1}{4}$ ft. are $31\frac{1}{4}$ ft., the distance of the ladder from the taller building; and 40 ft. less $31\frac{1}{4}$ ft. is $8\frac{3}{4}$ ft., the distance of the ladder from the lower building.

WILL R. MURPHY, *Knox, Ind.*

[15] There are seven answers as follows:

18 carats—72, 68, 64, 60, 56, 52, 48 gr.

20 " — 6, 15, 24, 33, 42, 51, 60 gr.

24 " — 34, 29, 24, 19, 14, 9, 4 gr.

SAMUEL WEST, *Columbus, Ind.*

[16] Lay one side of the room down on a level with the floor; it is evident that the fly must take the diagonal of this plane 20 ft. by 20 ft. or 28.28 ft.

RABENF.

[18] No correct solution sent in. J. D. B., Grandview, sends a result, 4 A. 116 sq. rd., but gives no solution. Is his result correct?

[19] First view: That the mind is spiritual rather than material; that mind and matter are entirely separate and distinct things; that matter has length, form, substance, etc., and mind has none of these things.

Second view: That the action of the mind is the function of matter, and therefore a part and attribute of matter.

W. G. COMBER, *Plainsville, Ind.*

[20] The tongue is a rectangular prismoid.

Let L and $B =$ length and width of larger base.

l and $b =$ length and width of smaller base.

M and $m =$ length and width of middle section.

$h =$ altitude of prismoid.

Then for the volume we can deduce this general formula:—

$V = \frac{1}{6} h (BL + bl + 4 Mm)$, and in the special problem we have $V = 24 (16 + 4 + 36) = 1344$ cu. in. = $9\frac{1}{2}$ ft. board meas.

A. M. SCRIPTURE, *Clinton, N. Y.*

[21] This query was stated wrong. It should have been: "There are three *2's* in the English language, to, two, and too. Spell the italicized word." As it was printed De la Coffee and H. D. Nicewanger gave the following answer: Twos, tos, and toos. Goold Brown gives *twoes* as the plural of two.

Perhaps this is sufficient answer for the query as corrected. ED.

[22] Several correspondents gave the correct answer—18¾ feet. A. M. Scripture finds that the lines cross at the same height, no matter how far apart the perpendiculars are.

CRITICISM.

Mr. W. G. Comber, of Plainville, condemns the solution of problem 5, State Board Questions for July, which is given on page 560 of September Journal, and offers the following correct solution:

Assuming the weight of the chicken to be 1 lb, a turkey will weigh 4 lbs. 4 chickens = 4 lbs. 7 turkeys = 28 lbs. 28 lbs. + 4 lbs. = 32 lbs., assumed weight of chickens and turkeys. Now this assumed weight (32 lbs.) is to true weight (72 lbs.) as 1 lb is to true weight of chicken and 4 lbs. to true weight of a turkey. 32 lbs. is contained in 72 lbs. $2\frac{1}{4}$ times; therefore assumed weights must be multiplied by $2\frac{1}{4}$ to give true weights.

$$\begin{array}{l} 1 \text{ lb} \times 2\frac{1}{4} = 2\frac{1}{4} \text{ lbs., true weight of chicken.} \\ 4 \text{ lb} \times 2\frac{1}{4} = 9 \text{ lbs., true weight of turkey.} \end{array} \left. \vphantom{\begin{array}{l} 1 \text{ lb} \times 2\frac{1}{4} = 2\frac{1}{4} \text{ lbs., true weight of chicken.} \\ 4 \text{ lb} \times 2\frac{1}{4} = 9 \text{ lbs., true weight of turkey.} \end{array}} \right\} \text{Ans.}$$

CREDITS.

Charles E. Mains 20; W. G. Comber 19; Jessie D. Montgomery 12, 13; — Fulda, Ind., 12, 15; M. G. Gaward 20, 21, 22; De la Coffee 19, 20, 21; Dixon Pennington 20; "Rabenf" 16, 20, 22; S. E. Harwood 19, 21, 22; Wilson Palmer 16, 19; J. D. French 20, 22; — Decatur, Ind., 20, 21, 22; J. D. Brant 18 (?), 20, 21; C. W. West, 13; — Trafalgar, Ind., 16; Samuel West 15, 20; U. S. Conn 16; C. E. Robinson 15; Milla Baird 13; — Herbemont, Ind., 16; Frank Davis 13; C. N. McMullen 14; A. M. Scripture 16, 20, 22.

If any have failed to receive proper credit please write to us and we will correct.

We are grateful to our readers for the splendid interest shown in Queries and Answers, and hope for a continuance of the same. Let everybody send in queries and their answers.

MISCELLANY.

ONLY a question of time: What o'clock is it?

LITERARY exclamation at seeing a fire: Dickens-Howitt-Burns.

THE STATE UNIVERSITY has opened "full"—over 40 in the Senior class, and over 100 in the Freshman.

CENTRAL NORMAL, at Danville, opened full—the “classical” class the largest in the history of the school. See advertisement.

DE PAUW UNIVERSITY has begun the year with nearly six hundred students—the largest opening in the history of the institution.

WHO WROTE THE MOST?—Warren wrote “Now and Then”; Bulwer wrote “Night and Morning”; and Dickens wrote “All the Year Round.”

COLUMBUS.—Amos Burns, late Supt. of Bartholomew Co., recently published a two-column criticism of the course of study in the Columbus schools.

THE CHICAGO INTER-STATE EXPOSITION, which opened September 7, will not close till October 22. The exposition is a fine one—well worth going to see.

BRAZIL.—The schools here are “crowded to suffocation,” so says report. This seems to be a chronic condition at Brazil. The authorities should remedy it.

ST. JOSEPH COUNTY.—In the County Fair premiums were offered for eighty-one different phases of school work—a first and second prize for each. Supt. Moon is a worker.

THE TRI-STATE NORMAL, at Angola, under the direction of L. M. Sniff, is rapidly gaining ground. The average for last year was nearly 200, and this year has opened with 250.

LITERARY ECHO is the name of a new 20-page quarterly, published in connection with the Normal at Covington, Ind. Vol. I, No. I looks well and reads well. Price, 25 cents a year.

THE SUPTS. CONVENTION for Southern Indiana, Northern Kentucky, and Southeastern Illinois. will meet in Jeffersonville, Ind., Oct. 21-2. R. W. Wood, of Jeffersonville, is Ch'n Ex. Com.

THE SCHOOL NEWS, published in Indianapolis for the past six years by Henry D. Stevens, has been discontinued. The unexpired subscriptions will probably be filled by *The Scrap Book*, of Decatur, Ill. Mr. Stevens has sold his publishing interest of co-operative partly-printed sheets for local educational papers, to G. A. Burgess, of Decatur, Ill. Mr. Stevens proposes to enter the ministry of the Unitarian Church.

THE July Journal contains a report of the County Superintendents' Convention. The following resolution, among others, was adopted:

Resolved, That it is the sense of this body that the Legislature of Indiana ought to pass a bill at its next regular session requiring a compulsory attendance upon the common schools of the state.

The author of the above resolution is hereby respectfully requested to defend it through the columns of the Journal. As the Journal takes

the lead in the educational affairs of the state, it will certainly give room for the discussion of a topic so momentarily important to the citizens of Indiana.

I. K. LEE.

ED. JOURNAL:—The solution of the 5th problem in the arithmetic questions for July, in Sept. Journal, seems to be incorrect. I solved it as follows, and believe my answers to be right: If 1 turkey weighs 4 times as much as a chicken, then 7 turkeys will weigh 7 times 4 times as much as 1 chicken, which are 28 times as much as 1 chicken, or = 28 chickens. 4 times 1 chicken + 28 times 1 chicken = 32 times 1 chicken. 32 chickens = 72 lbs. 1 chicken = as many lbs. as 32 is contained in 72 lbs., which are $2\frac{1}{4}$ times; therefore 1 chicken weighs $2\frac{1}{4}$ lbs. Since 1 turkey weighs 4 times as much as 1 chicken, then 1 turkey weighs 4 times $2\frac{1}{4}$ lbs. = 9 lbs. 4 chickens, each weighing $2\frac{1}{4}$ lbs. = 9 lbs. 7 turkeys, each weighing 9 lbs. = 63 lbs. Total weight, 72 lbs. Respectfully, M. W. SPARKS, *New Albany*.

W. A. BELL—*Dear Sir*: The solution of problem seven, of the June list, as given in the August Journal, is evidently wrong; and the solution in the September Journal, by J. N. Myers, is also incorrect. The payment of March 1 is made 10 mos. before it was due. $\$100 \times \$1.05 = \$105$. The second payment is made 7 mos. before the note was due. $\$200 \times 2.035 = \207 . $\$207 + \$105 = \$312$. $\$1000 - \$312 = \$688$. This last was paid four mos. before it was due. $\$688 \div 1.02 = \$674.50\frac{4}{11}$. Ans., the balance due Sept. 1.

Proof—The interests and payments should equal \$1000. $\$5 + 7 + 13.49\frac{4}{11} = \$25.49\frac{4}{11}$, amount of interest. $\$100 + 200 + 674.50\frac{4}{11} = \$974.50\frac{4}{11}$, amount of payments. $\$25.49\frac{4}{11} + 974.50\frac{4}{11} = \1000 .

Very respectfully, GEO. W. DEALAND, *Perrysville, Ind*

POSTAL CARDS.—About 300,000,000 postal cards are used in the United States each year. This is nearly a million a day, omitting Sunday. If the number used in one year were laid end to end, they would extend the distance of 22,000 miles, nearly once around the earth. Spread over a surface, they would cover more than a square mile; laid on top of one another, they would reach the distance of 95 miles in height; piled together they would form a 37-foot cube. From them could be made a monument 20 feet square at the base, 10 feet square at the top, and 230 feet high. Laid two inches deep, they would make a pavement 10 feet wide and 6 miles long. They are equal in bulk to 400 cords of wood. A paper wall 18 inches thick, 4 feet high, and $1\frac{3}{4}$ miles long could be formed from them, more than enough to inclose a farm $\frac{1}{2}$ mile long and $\frac{1}{4}$ mile wide. STATISTICIAN.

THE TENNESSEE State Teachers' Association met at Jackson, Aug. 23-26. The meeting was the largest and most enthusiastic ever held. The discussions were spirited, thoughtful, and showed a growing element among the pedagogues of the state. Among the leaders in discussion were Hon. F. M. Smith, State Supt.; Hon. Thomas Paine, of Jackson; Prof. T. P. Brennan and Dr. Broden, of Nashville; Captain Douglass, Prof. J. S. White, and a number of others. One evening was given entirely to the ladies for the discussion of question of "The Education of Woman." The exercises were opened by very fine recitations by two lady elocutionists, Miss Brennan of Nashville, and Mrs. Wiltshire. These were followed by three strong, thoughtful, gracefully worded papers, by Mrs. Bettie Buford, Prin. of a ladies' school

at Clarksville, and by Mrs. Jennie Higbee and Clara Conway, both Principals of schools for young ladies at Memphis.

The general association was kept in order by Capt. W. H. Garrett, of Nashville, a typical presiding officer. The next meeting is to be held in East Tennessee.

READING CIRCLE NOTES.

A remark heard on every hand, among business men, professional men, and members of the family is, "I find so little time for reading." The remark is true from the fact that many have not formed proper habits of reading, and find it nearly impossible to concentrate the mind upon a subject because of the knowledge of the limited time at their disposal. Not a day passes but many opportunities present themselves for a few minutes reading and reflection if teachers will embrace them and put themselves in a condition of mind to use them to advantage.

The teacher more than any other person finds these "odds and ends" of time during his term of school, and happy is the one who can turn his attention to some line of thought, to the exclusion of outside objects. Such training of the will is the greatest agent in self-culture. "Taking care of the minutes," says Horace Mann, "is the first principle of self-culture." The determining and carrying out of definite plans give self-control—a necessary factor in self-culture.

For this purpose more than for any other was the Reading Circle conceived and matured. It will give teachers such information pertaining to their work and leading to general culture as would convince them of the importance of improving their time. "We are not a nation of readers because we have not found the time to read," says an English critic. "We are not a nation of readers," says another, "because we do not improve our time."

Though the criticisms are just, the latter states the case clearly as it is.

The Reading Circle of Indiana is designed to meet the wants of all classes who have but a limited time each day at their disposal, and not for the student whose time may be continuously given to a particular study.

Let the coming year be one among the important ones of the teacher in that he will *determine upon* and *carry out* a course of reading requiring but *thirty minutes a day* during a six months school-term. The efficient work of the teacher and the self-satisfaction of having "done the best he could" will be the reward.

Reports of organization have been received from fifty counties. Others are known to have formed circles, but no statements have been sent in.

The first edition of Outline Manuals (3500 copies) has been exhausted and as many more ordered printed. It is believed that the the possession and use of these outlines will very materially improve the reading done this year.

Liberty Twp., Hendricks county, with 10 teachers, enrolls 13 members in the Reading Circle. Lawrence, St. Joseph, Elkhart, Putnam, and Wabash counties include every teacher.

The county having the largest Reading Circle membership so far reported is Elkhart—180. Putnam follows with 165; Sullivan with 150; Jackson with 135; Lawrence and Boone, 130 each; St. Joseph, 125; Bartholomew, Fountain, Miami, Madison, Morgan, Daviess, Wabash, Shelby, Franklin, and Parke, 100 each. Many others, also, have enrolled 80 to 100 members. The average membership of the 50 counties reported is 75.

It should be remembered that no fee of any kind attaches to Reading Circle members this year, *who use the two books "Lights of Two Centuries" and "Hand-book of Psychology."*

Such as read books submitted for previous years will pay the fees (membership 25c, and examination 25c) heretofore provided for.

Wayne county has a membership of 90, and *"SEVENTY of these have obligated themselves to take the June examination in this year's work."*

COUNTY INSTITUTES.

CASS COUNTY institute was instructed by Cyrus W. Hodgins and Dr. E. Test, and everybody praised the work.

MARION COUNTY, with W. H. Payne, of Michigan University, and W. F. L. Sanders for instructors, had a profitable meeting.

HENRY COUNTY always has a good institute, and this year was not an exception. R. G. Boone and George F. Bass were the principal instructors.

FRANKLIN COUNTY.—"Our institute was a complete success." Instructors: R. A. Ogg, D. E. Hunter, Mrs. Lucia Martin. A. N. Crecraft is making an excellent Supt.

JEFFERSON COUNTY.—Institute held Aug. 15. Instructors: W. H. Fertich, Jno. M. Goulden, E. E. Smith, of Chicago, and others, local helpers. Attendance good; interest strong.

ADAMS COUNTY.—The principal instructors were R. W. McFarland, Pres. Oxford College, Oxford, O., and W. F. Yocum, Pres. Ft. Wayne College. W. A. Bell was present one day.

WABASH COUNTY is kept in the straight and narrow way by Supt. Myers. He had as instructors A. G. Alford and A. R. Charman. State Supt. La Follette and W. A. Bell each gave "a lift."

MONTGOMERY COUNTY had for instructors W. H. Fertich and Jesse Lewis. The teachers passed a resolution instructing the Supt. not to exceed the county appropriation in employing instructors next year.

NEWTON COUNTY.—Attendance good. A. R. Charman, of the State Normal, was principal instructor, and was assisted by Josephine Cox, Annette Ferris, and J. M. Culver. Supt. Hershman is the right man in the right place.

WHITE COUNTY had for principal instructor W. W. Parsons. He was assisted by J. B. Wisely and B. F. Moore. C. E. Kircher, Will H. Hershman, and W. A. Bell each gave a lecture. There was a good week's work done.

HOWARD COUNTY had its work done chiefly by Howard Sandison and O. J. Craig, and of course it was well done. This is one of the model counties in attendance and enthusiasm. Supt. Barnes has his work well in hand.

KNOX COUNTY.—The principal outside help was R. A. Ogg, who gave excellent satisfaction. Others who "lent a hand" were J. W. Runcie, J. W. Walters, J. A. Marlow, and W. A. Bell. The new Supt., W. O. Johnson, takes hold well.

PULASKI COUNTY had a good institute this year. The instructors were Chas. E. Kircher, W. A. Warfell, W. B. Sinclair, the first part of the week; and B. F. Moore, J. C. Macpherson, W. A. Bell, and State Supt. La Follette the latter part.

SCOTT COUNTY.—Enrollment large; interest good. Instructors: M. J. Mallery, E. F. Sutherland, John F. Engle, and T. J. Shea. W. M. Whitman is county superintendent. About 40 joined the Reading Circle. This is *big* for "Little Scott." W. D. Chambers was secretary.

THE SWITZERLAND COUNTY INSTITUTE met at Vevay August 15th. Attendance large, interest and order excellent. Instructors: E. F. Sutherland, of Mitchell, and E. E. Smith, of Chicago,—the latter making a strong appeal for Reading Circle work. Two evening lectures were given.

PIKE COUNTY.—Institute held Aug. 22, at Petersburg; enrollment 80; institute "one of the best ever held in the county." Instructors: N. C. Johnson, W. J. Royalty, J. T. Miller, G. C. Cooper, Edward Taylor, E. B. Bryan, and W. H. Pennington. Seventy-three joined the Reading Circle.

FLOYD COUNTY held its 23d Institute August 29. Foreign instructors: J. F. W. Gatch, E. F. Sutherland. Resident, J. R. Weathers and J. M. Boyd. Attendance equalled the number of teachers engaged in the county. Supt. L. H. Scott proposes to keep Floyd county in line. E. B. Walker was secretary.

HAMILTON COUNTY.—Full and enthusiastic as usual. The principal worker from abroad was Eli F. Brown. He was well liked. Others who assisted were J. V. Coombs, E. M. C. Hobbs, and W. A. Bell. Home workers, Dr. E. Test, J. H. Mavity, A. G. Neal, and Geo. F. Kenaston. Supt. Hutchens keeps things straight.

KOSCIUSKO COUNTY.—Institute held August 29; enrollment 201. Prof. Joseph Carhart and Geo. F. Bass were the principal instructors. "Perhaps the teachers of this county never before received such grand ideas with reference to *how* to teach." "Institute marked throughout by real enthusiasm." "Great credit is due Supt. McAlpine."

HENDRICKS COUNTY.—Institute convened at North Salem, Aug. 29. R. G. Boone and Miss Charity Dye were the regular instructors, assisted by others. Lectures were given by Prof. Boone, State University; Pres. Benton, Butler University; and Pres. Martin, De Pauw University. Attendance not so good as that of the previous year.

ELKHART COUNTY Institute was held August 29. Enrollment 300. Instructors: Mrs. E. M. McRae, H. B. Brown, W. H. Sims. Lecturers: D. S. Jordan, H. M. La Follette, George F. Bass, and Mrs. McRae. Reading Circle fully organized. Work well received. Interest excellent. Supt. Spohn is a worker. Outlook never better.

LA GRANGE COUNTY.—"It is the general expression that the institute this year was one of the most interesting and profitable ever held in the county." Prof. W. H. Payne, of Michigan University, and A. Tompkins were the principal instructors. Prof. Payne has been here three years in succession, and is well liked. Supt. Machan is doing good work.

HANCOCK COUNTY held a rousing institute August 29. The enrollment reached 250. Instructors: W. H. Venable of Cincinnati, W. F. L. Sanders, and Miss Kate Huron. An evening entertainment, given by W. H. Venable, Lee O. Harris, and J. W. Riley, was greatly enjoyed. Mr. Venable's unique lecture on "Humor and Pathos of School Days" is pronounced a "*gem*." W. H. Glascock is Co. Supt.

MARTIN COUNTY.—Owing to the "contest" not yet settled in this county over the county superintendency, the teachers were favored with two institutes. On the week beginning August 15, W. T. Porter, the new appointee, held an institute, which was well attended. On the week following W. T. Mitchell, the old Supt., held his institute, which was also well attended. Many teachers attended both, but the regularity of attendance was not first-class.

BROWN COUNTY.—Institute August 22. Instructors: A. W. Graham and J. Fraise Richard. Mrs. A. E. Staples gave some reminiscences of the first institute in Brown county, 1865. The institute gave

a literary and musical entertainment on Wednesday night. Messrs. Graham and ex-Supt. Neidigh climbed to the top of Weed Patch Hill, the highest point of land in the state. Supt. Snyder fills his new position well. T. C. McGlashan was secretary.

POSEY COUNTY.—Institute began August 29. J. A. Woodburn, W. B. Creager, and P. P. Stultz were the instructors. Our new Supt. O. L. Sewell, is the right man in the right place, and he has a great interest in the schools of the "land of hoop-poles and pumpkins." The attendance was large and quite an interest was manifested. Resolutions commending the act of the State Board requiring literary reviews, and the Reading Circle, were adopted. A County Teachers' Association was organized, and about 60 joined the Reading Circle. Posey pays her district teachers higher wages than any other county in the state.

PERSONAL.

J. F. Young is at Markle.
 A. L. Miller is first at Laketon.
 J. T. Graves is the Monon man.
 L. O. Dale has charge at Roann.
 J. W. Barnes is first at Brighthurst.
 W. W. Black is continued at Flora.
 T. M. Irelan is principal at Idaville.
 J. D. Hostetter directs at New Ross.
 W. G. Lane is master at Miamitown.
 O. E. Connor continues at Canneltown.
 A. E. Alexander controls at Somerset.
 F. C. Cassell is principal at Goodland.
 Charles Morris is principal at Morocco.
 A. H. Barber holds forth at Walkerton.
 Alvin Helton directs at Young America.
 W. B. Lairy holds the fort at Galveston.
 T. S. Merica is the new Supt. at Garrett.
 S. M. McD. Snow is principal at Geneva.
 E. E. Rodgers is the man at La Fontaine.
 H. D. Vancleve is principal at Darlington.
 W. C. S. Jordan holds the reins at Cutler.
 P. B. Shinn is the best man at Deer Creek.
 Geo. W. Walters is head man at Royal Centre.
 H. F. Wilkie directs the young ideas at La Gro.
 Wm. M. Craig continues principal at Waveland.

F. L. Harris is now in his third year at Roanoke.
H. L. Tiller is the man to consult at Lincolnville.
H. H. Loring is serving his second year at Hebron.
A. C. Geyer has control of the New Carlisle schools.
J. H. Neff is serving his seventh year at Bunker Hill.
J. H. Gildersleve principals the schools at Brookston.
W. S. Walker has begun his second year at Andrews.
A. N. Higgins will remain another year at Waynetown.
Chas. Dolan is principal of the Mishawaka high school.
Jesse Lewis, of Bellmore, will return to Lindsborg, Kan.
P. S. Tracy has entered upon his fourth year at Warren.
John E. Edmonson is principal of the Ellettsville schools.
E. B. Rizer controls educational interests at Burnettsville.
C. B. Beck is serving his third year as principal at Camden.
M. L. Galbreath will continue to hold forth at Liberty Mills.
J. M. McBroom has charge of the schools at Hope this year.
Jas. H. Clark is the new principal of the Hope Normal School.
A. T. Reid remains this year at Oxford, at an increased salary.
Robert Spear continues principal of the Evansville high school.
C. D. Berry directs the educational interests at South Wabash.
J. M. Johnson still continues at the head of Marengo Academy.
James H. Bartlett is principal of the high school at South Bend.
James Du Shane continues in charge of the South Bend schools.
C. E. Newlin continues as principal of the Frankfort high school.
A. G. Alford has achieved a real success in his institute work this year.

Stanford Williard, of Wakarusa, is agent for the Journal in his county.

W. W. Wirt, late Supt. of the Portland schools, takes the Albion schools.

C. O. Broxon takes charge of Leadville, Colorado, schools, at \$100 per month.

A. O. Reubelt, formerly of Winamac, is now Supt. of the schools at Tuscola, Ill.

Edgar Taylor, a late graduate of the State University, has charge of the Paoli schools.

J. W. Parker, late of Carmel, is now principal of the high school at Tuscola, Illinois.

J. M. Robinson, a State Normalite, will take charge of the Clayton schools this winter.

G. N. Peak, the new Supt. at North Vernon, has recently taken to himself a wife. *Correct.*

G. W. Martin, a graduate of Wabash College, '87, is principal of the high school at Bluffton.

Miss Mattie Benbow, one of Hendricks county's best primary teachers, goes into the Danville schools for the year.

Anna L. Jones, a former Clinton county teacher, is now teacher and student in the M. E. College at Winfield, Kan.

✓ Leroy D. Brown, late School Commissioner of Ohio, has accepted the presidency of the State University of Nevada.

A. E. Davisson, for many years principal of the high school at Rochester, is now principal of the schools at Burlington.

J. F. W. Gatch, for several years past principal of the Normal at Hope, has given up the school and gone to Cincinnati.

E. E. Smith, now the General Western Agent of D. C. Heath & Co., of Boston, has his office at 185 Wabash Avenue, Chicago.

Perry D. Creager, late Supt. at Albion, has been elected Supt. at Kendallville, *vice* E. W. Wright, resigned. Salary \$1000.

✓ Chas. E. Hodgkin, formerly of this state, has been promoted to the principalship of the Academy at Albuquerque, New Mexico.

Amos Sanders, for several years past Supt. of North Vernon, is devoting this year to business—pushing the sale of a desk of his own invention.

Eugene Bohanon, of Booneville, late of the class '87, State Normal, has been secured to direct the Brownsburg schools through the coming session.

Elias Boltz, who has been Supt. of the Mishawaka schools for several years past, has decided to rest from his school labors during the coming year.

John A. Wood has changed his mind, and instead of finishing his course at the State Normal this year, will serve as Superintendent at Charlestown.

Philmer Day, last year of Osgood, has been placed in charge at Versailles. With a new wife to assist and inspire he will doubtless do a successful year's work.

Miss Alice Bodger, a successful teacher and one who has been connected with the New Albany schools for several years, is resting this year on account of her health.

Miss Donia Allen, who has taught in the Indianapolis schools for many years, has accepted a position in the Girls' Classical School, in this city, at an increased salary.

✓ Laura Hodgkin, a graduate of the Richmond Normal School, daughter of Prof. Cyrus Hodgkin, of Earlham College, will teach this year in the Academy at Albuquerque, New Mexico.

J. Russell Webb, author of Webb's Word Method, died at his home in Benton Harbor, Mich., Sept. 10. Prof. Webb was the author of the first practical Word Method Reader.

Mrs. Fannie Burt, teacher in the model school connected with the State Normal; has had her salary increased to \$1000. As a primary teacher Mrs. Burt has no superior in the state.

Thomas Charles, an old-time Indiana teacher, is now selling kindergarten goods and primary school aids, at 75 Wabash Ave., Chicago. See his "wheelbarrow" among the advertisements.

Dr. E. Test, principal of the Union High School at Westfield, for his institute work this year received some strong words of commendation. His work in physiology is especially valuable.

Mrs. Charlotte L. Ball, the grammar school teacher in Huntington the past two years, and for several years a teacher in our state, has accepted a position in the Salina, Kan., high school.

E. B. Milam and W. H. Pennington, both ex-Supts. of Knox Co., have formed a partnership and opened a book store in Vincennes. They supply anything a teacher uses in the school-room.

E. M. Teeple, of Charlestown, was recently married to Miss Lena Buerkle, of the same place. The Journal extends congratulations. Mr. Teeple has just been elected Supt. of the Butler schools.

John M. Bloss has removed his family from Muncie to Topeka, Kan., his new field of labor. Mr. Bloss leaves many warm friends in Indiana, who wish him abundant success in his new home.

D. M. Nelson, late Supt. of Jasper county, and Bailey Martin, late principal of the Franklin high school, both graduates of the State Normal, are now at Hastings, Neb., in the real estate business.

Ambrose Blunt, for many years Supt. of the Goshen schools, is now Supt. of the Ligonier schools. It is noticeable that Mr. Blunt followed Mr. Luke as Supt. of the Goshen schools, and he now follows him at Ligonier.

W. W. Grant, principal of the Indianapolis high school, spent his summer vacation a year ago in Europe, and liked it so well that he went again this year and took his wife. He is back and at work, looking hearty.

Edward W. Wright, a graduate of Harvard, who has been Supt. of the Kendallville schools for the past two or three years, has resigned his place. He leaves with strong letters of commendation from school board and citizens.

P. A. Allen, who is serving his seventh year as Supt. at Bluffton, has collected a school library of more than *one thousand* well selected books, and paid for all by private enterprises directed by himself. This shows what enterprise will do.

W. H. Payne, Professor of Pedagogics in Michigan University, continues to visit some institutes in Indiana. He always does superior work, and the Journal always feels like congratulating the counties that are fortunate enough to secure his services.

Jas. Baldwin has tendered his resignation of the Greencastle schools to accept a place in the literary department of Harper & Bros. of New York, at a salary of \$2,500. Prof. Baldwin has achieved a marked success in a literary line and is a credit to Indiana.

S. F. Spohn, Supt. of Elkhart county, employed a part of the summer vacation in changing his state. He was married to Miss Maud Bonham, of Avilla, an excellent teacher and a fine musician. The wedding trip included Harper's Ferry, Washington, Philadelphia, New York, the Hudson, Niagara, etc., etc. There are a few other "bachelor" superintendents that would do well to follow Bro. Spohn's example.

Prof. L. S. Thompson, of Purdue University, has been tendered the position of Supt. of Writing in the Cincinnati schools, at a salary much larger than he is now receiving. Prof. Thompson has not yet indicated acceptance of the new position, and a strong effort is being made to induce the trustees at Purdue to increase his salary so as to retain him. He has been a useful man in his present position, and it will be difficult to fill his place if he goes.

Dr. David S. Jordan, President of Indiana University, was recently married to Miss Jessie L. Knight, daughter of Chas. S. Knight, Esq., of Worcester, Mass. Miss Knight has recently been a student in Cornell University, making a specialty of Modern Languages and Anglo Saxon. It will thus be seen that her line is not a "fish line," which is the Doctor's specialty. The uniform testimony of those who have met Mrs. Jordan is to the effect that she is intelligent, entertaining, and attractive, and that the Doctor is to be congratulated on the results of his summer's work. The Journal extends hearty congratulations to Dr. and Mrs. Jordan, and hopes that their "honey-moon" may shine forever.

BOOK TABLE.

SONGS, GAMES, AND RHYMES: *Compiled by Mrs. Eudora Hailman.*
Thos. Charles, 75 and 77 Wabash Avenue, Chicago, Western
representative of the Milton Bradley Company, Publisher.

Mrs. Hailman, whom the teachers of Indiana will recognize as authority on subjects pertaining to kindergarten culture, has in this book of 163 pages given a most excellent collection of Songs, Games, and Rhymes for the nursery, kindergarten, and primary schools. The songs are accompanied by notes and suggestions as to their proper

use. The table of contents indicates the subjects of the different songs. Here we find songs for opening exercises, for closing exercises; songs and games of the seasons; weather songs and games; trades and occupations, etc. Mrs. Hailman believes that the cultivation of the musical nature of the child should begin at a very early age, and that a correct beginning is as essential as in any mental process. Acting on this belief, this book is the result, and a most excellent result we must pronounce it. We find Mrs. Hailman's initials attached to some of the music as well as to many of the songs.

AS ONE OF THE RIVERSIDE LITERATURE SERIES, Houghton, Mifflin & Co. have issued an extra number, containing programs for the celebration of the birth-days of American authors. Alfred S. Roe, principal of Worcester Mass. high school, is the author. We find in this book programs for Longfellow, Whittier, Holmes, Lowell, Hawthorne, Emerson, Bryant, Thoreau, Taylor, Irving, and Cooper birth-days. There are eight different programs for Longfellow, Whittier, and Holmes, each, thus giving great variety with but a single subject. The student is referred at the opening of each new subject to the books wherein may be found anything concerning the life of the author under consideration. At the close of the book may be found a record of a four years' work in the study of American authors by the pupils in Worcester high school. To every student of literature, the book must be worth one hundred fold the price, which is but 15 cents

SONGS FOR LITTLE CHILDREN: *Composed and arranged by Eleanor Smith. Published by the Milton Bradley Co., Springfield, Mass. Thomas Charles, 75 and 77 Wabash Avenue, Chicago, Western representative.*

This book contains a very excellent collection of songs and games for the use of kindergartens and primary schools. Miss Eleanor Smith, compiler of the book, as well as the author of most of the music and many of the songs, has had an extensive musical experience. Great attention has been paid not only to the quality of the music but also to the regular gradation of difficulties. Consecutive steps in the scale or skips the easiest and most natural are only used. Proceeding on the principle that music and words should both conform to the laws of rhythm, she has here given a collection that must develop in the child an appreciation of what is best in this direction. Miss Smith thinks that the first music of a child should be drawn from pure sources, and that song-makers should do their work wisely. Both these principles seem to be effectually carried out within the pages of this book.

THE SCHOOL, is a new addition to school literature. It is published at Springfield, Mass., for the avowed use of school officers and trustees, everywhere. It looks well, it reads well. Its contents are more general than that of the ordinary school journal, a large part being devoted to school architecture and school ventilation. Editor's name not given.

BUSINESS NOTICES.

DON'T FAIL to read the advertisement concerning "Select Stories for Opening Exercises in Schools," on another page.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the **Teachers' Co-operative Association**, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

A CARD TO TEACHERS.—If you have school books which you do not care to keep, I will take them in exchange for books you may need. Please send me a list of those you would LIKE TO SELL OR EXCHANGE. Send orders for cheap school books to C. M. BARNES, 151 and 153 Wabash Avenue, Chicago, Ills. 1-1f.

SULLY'S TEACHERS' HAND-BOOK OF PSYCHOLOGY—Adopted for use by the Reading Circle of Indiana, will be supplied to teachers at the following prices: Single copies, post-paid, \$1.23; in quantities, party ordering paying express, \$1.10. This book can be obtained for any teacher or member of the Reading Circle by addressing Messrs. D. Appleton & Co., 152 and 154 Wabash Avenue, Chicago. 9-3f

COLUMBUS NORMAL SCHOOL will open 8th Term November 8, 1887; 9th Term, January 17, 1888; 10th Term, March 28. Third Annual Teachers' Institute, January 6; Commencement, July 27 and 28, 1888. Course of Study: Preparatory, Teachers, Commercial, Musical, Stenographic, Scientific, and Classic. The new normal building (valued at \$10,000) will be ready Nov. 8th, 1887. For catalogue or any information, address J. E. Polley, Principal, Columbus, Ind. 10-1f

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THE NATURAL OR DEVELOPING ELEMENT
IN MODERN METHODS OF ELE-
MENTARY CULTURE.*

BY W. N. HAILMAN, SUPT. LA PORTE SCHOOLS.

IN looking for the limitations of my subject, I find it seriously entangled with the other elements enumerated by our President.

The *Socratic Element* in modern methods appears simply as an adaptation of the art of questioning to the requirements of self-active development on the part of the learner. The method of Socrates was a *developing* method: it was strictly inductive, heuristic,—seeking discovery, inventive. He did not, like the “sophists,” start with definitions and dogmas seeking to deduce therefrom and to classify thereby the concrete phenomena of life; but he proceeded inductively from definite facts of experience and observation to unforeseen conceptions and convictions. On the other hand, he was eminently practical,—*natural*—: “he had, as Cicero wrote, called philosophy down from heaven to earth.”

What, again, can be meant by the *Objective Element* in modern methods, if not the recognition of the fact that in their *natural development* the higher phases of thought rest on the lower, that consciousness in all its forms can grow only on the soil of sense-

* Read at the National Association at Chicago. President Sheldon had assigned the remaining “Elements of Modern Methods”—the Socratic, the Objective, and the Scientific—to other speakers.

perception, and that reliable insight and efficient conduct can be derived only from thoughtful, actual contact with the external things of life.

Lastly, I recognize in the *Scientific Element* the tendency, induced by the observation of *nature* and *development* to let all things declare their origin and destiny by their own *natural self-active development*, without any forcing or guiding, bossing or predestinating interferences from without. Indeed, where the scientist becomes active on the side of this natural development and rises from observation to experiment, he confines himself to the removal of hindrances and to the supplying of favorable conditions: and even in this activity he adapts himself strictly to the results of previous observations, obeys the behests of natural self-active development.

Thus, the Socratic element appears as an early application of the natural and developing method to dialectics; and the objective or intuitional element coincides with the natural or developing method as applied in the earlier phases of child-life. On the other hand, we find that the natural or developing method rests in its genesis on strict adhesion to scientific modes of observation and reasoning, and in its application acknowledges scientific principles as the criteria of all it undertakes to do: it stands or falls on its claim of being scientific.

Inasmuch, then, as the natural or developing method rests on science, and inasmuch as science may be viewed as refined and systematized common sense,—we may expect to find the beginnings of this method in the earliest dawn of history: for, probably, common sense somewhat swayed the thoughts and destinies of mankind at all times. Yet there are obvious reasons for fixing on the beginning of the Baconian period as the birth-time of the method. Neglecting, therefore, the long previous period of gestation, let us pass in rapid review the chief points in the history of the now lively infant.

The child was born when Bacon cut loose from a senseless reverence for antiquity, and for the authority of men and of humanity. "Truth," he claimed, "is the daughter of time and not of authority": therefore *we* are the ancients, necessarily

possessed of greater experience, wider observation, and deeper meditation, favored with a clearer vision of truth, than our forefathers "who are old only with respect to ourselves, but young with reference to the world."

In the search for truth—scientific truth—experience is his sole reasoner; for this he would establish securer and ampler foundations, freeing it from vagueness and arbitrariness, and rendering it continuous and progressive, i. e., developing. At the same time, he clearly recognizes the supremacy of nature, which is to be commanded only by obeying her: for no power can break her chain of causes.

In his new teaching he would offer no violence—dialectic, authoritative, or mystic—and spread no nets for the judgment of men, but lead them to things themselves and their relations. He gives it as "the capital precept that the eye of the mind be never taken off from the things themselves, but receive their images truly, as they are": we must "renounce notions and begin to form the acquaintance of things." Only thus can man hope to "learn the difference between the idols of the human mind and the ideas of the divine mind."

He finds the real and legitimate goal of the sciences in "the endowment of human life with new inventions and riches"; and severely scores "the great crowd of teachers who know nothing of this, but consist of dictatorial hirelings."

Comenius, the mightiest among Bacon's early interpreters in the work of education, follows the master closely in the esteem in which he holds experience and things. "Things," he says, "are essential, words accidental; things the body, words the dress; things the kernels, words the shell. Both should be given simultaneously; but above all the things,—for they are objects both of knowledge and of language." He refers to divine revelation for their explanation; and finds in them the criteria of human ideas.

He is a firm believer in development, for "all we do and suffer in life goes to show that we have not attained the ultimate aim, that all in us, like ourselves, strives higher." "Nothing," he exclaims, "can be put into man from without; but only what

he has in himself undeveloped, that can be developed and unfolded and shown in its nature."

He insists on the necessity of cultivation and guidance in development; and, in this bases his method wholly on an imitation of nature. From her he learns "to observe the right time for work, to prepare his material before he forms it, to select suitable subjects and to prepare them properly, to proceed deliberately and without confusion, to work from within outward, to go from generals to particulars, to proceed continuously and step by step, to bring things to their issue, and to avoid antagonism and injury."

It will be seen that he has not yet learned to study the child's nature and to follow it, but he rather observes natural processes in the development of lower organisms, and takes his lessons from these.

Comenius is credited with being the first to see clearly the value of manual activity as an educational factor. The quotations, however, on which this claim is based, justify the opinion that it has very slight foundation. His utterance that children "should learn to say with their lips, and to utter (their ideas) with their hands," has reference only to writing. The celebrated "learn to do by doing" refers expressly to the arts of "writing, speaking, singing, and reckoning," and in no way to manual work. In his description of the proposed vernacular school he as signs as the last task "instruction in a general way concerning the mechanic arts"; but there is nothing in his *Didactica Magna* to warrant the conclusion that this was to be done in any other way than by words and pictures. Even the strongest passage in his "Outline of the Pansophic School" leaves us in doubt concerning the character of the "activity of the actions" which is to form a portion of the school work.

On the other hand, it is significant that Francke, who based his marvellous practical achievements at Halle on the suggestions of Comenius and Locke, gave his boys regular instruction in wood-turning, pasteboard work, the grinding of lenses, engraving, and the like, while the girls learned to spin, to knit, to sew, and even to split wood.

At any rate all the great names in the growth of educational science and art since the time of Comenius—Locke, Francke, Rousseau, Basedow, Salzmann, Heusinger, Pestalozzi, Herbart—give increasing attention to work as an educational factor, until in Fröbel the thought appears fully developed for practical fruition.

Among these men, Locke cleared the way for development by proving the absurdity of the Cartesian innate principles, and by establishing the value of sensation and reflection as the only true sources of ideas, as objects of thought.

But development is impossible without freedom and an unswerving and loving regard for the nature of the organism to be developed. It is Rousseau's great merit to have established this thought with a convincing fervor that compelled the discipleship of the best and strongest of his time. The smouldering fire of manly self-assertion his impetuosity fanned into a furious blaze; and mediæval hindrances to human progress at last found a living grave in history.

At last, the problem was clearly and impressively stated, burnt into the very consciences of men. Henceforth education must seek its aim in the continuous development of whatever is ascendingly highest in man, as a human being,—as the best thought of God; henceforth education must seek its ways in cheerful, active obedience to the immutable laws that live in the innermost nature of the being it would educate; henceforth the history of education is an account of successive attempts to solve the problem stated by Rousseau.

The clearest and most comprehensive solutions have been offered by Dittes from the stand-point of the school, by Spencer from the stand-point of science, and by Fröbel from the stand-point of full practical humanity.

Dittes bases his solution, so far as school-instruction is concerned, on what may be designated as the *natural* and the *cultural* principles. The natural principle requires that instruction be adapted to the nature of the pupil, generally speaking, to human nature. It is concerned chiefly with methods and the limitations of the work presented. It postulates self-activity, spon-

taneous development from within on the pupil's part, and fullest possible adaptation of the work to the learner's powers on the part of the teacher.

The cultural principle demands the adaptation of instruction to the sum of attainments in civilization that characterize our people and the period in which we live. It is concerned chiefly with subjects of instruction, courses of study, in short, with the question 'what shall we teach?' It postulates truth and practical applicability to the needs of life as the chief criteria in the choice of material.

The two principles conjointly demand *all-sidedness* and *permanence* of development both with reference to the learner's powers and to the cultural elements of instruction; as well as subjective and objective *unity* and *harmony* with reference to the learner's education as a whole.

It would be a most gratifying undertaking to show in detail the practical application of these principles in the work of the school. Essentially Pestalozzian in conception, they were strengthened and purified in thoughtful experience by Diesterweg, and—at last—revealed to us in their cosmic wholeness by the rigorously philosophic mind of Dittes. The scope of my subject, however, will not permit this digression, and I return to our problem.

Spencer approaches the problem from the stand-point of science, or "organized knowledge." He finds the indispensable condition for a perfect scheme of culture in the establishment of a rational psychology, i. e., in the organized knowledge of child-nature and human nature.

In the absence of such a psychology, he offers some "empirical approximations towards a perfect scheme." For this purpose he places himself broadly on his law of evolution, which implies in the progress of life continuous changes from less to greater coherence, from homogeneity to heterogeneity, from indefiniteness to definiteness, both in matter and motion, or as some of us would say, in body and spirit.

The progress from less to greater coherence and from homogeneity to heterogeneity implies the "increase in structure" which he designates as the essence of development; it involves the laws of heredity, variability, and selection.

Among these, heredity bids education "conform in order and method to the natural process of mental evolution," and grants success only if we "render our measures subservient to that spontaneous unfolding which all minds go through in their progress to maturity"; it demands that "the genesis of knowledge in the individual follow the same course as the genesis of knowledge in the race," that—therefore—in education we proceed from the empirical to the rational, from art to science, from doing to knowing.

Variability and heredity together postulate the principles of self-development or self-activity; while variability and selection point to joy or pleasure as the true criterion of healthful mental action.

The progress in evolution from homogeneity to heterogeneity necessarily leads to solicitous regard for individuality. It bids us proceed from the simple to the complex, and—in the progress from indefiniteness to definiteness—to go from the concrete to the abstract, from the particular to the general.

In these suggestions Spencer runs fairly parallel with Dittes's natural principle. Similarly in "What knowledge is most worth" he coincides fairly with Dittes's cultural principle. He finds the function of education in preparation for complete living, for the use of all our faculties to the greatest advantage of ourselves and others, for the right ruling of our actions in all directions, and under all circumstances, surely the highest ideal outcome of culture. He furnishes, at the same time, a list of human activities in their order of cultural possibility:—direct self-preservation, parenthood, citizenship, and refinements of life. In accordance with these considerations he suggests a course of study as comprehensive as his one-sided stand-point will permit.

It is to be regretted that at this point Spencer should estimate the educational value of the human activities in the order of their possibility, just enumerated, rather than in the inverse order of their desirability. While, indeed, the higher activity rests on the lower, and can become strong only on the strength of the lower, yet the lower owes its value wholly to the higher possibilities involved therein. Therefore, self-preservation, parenthood, cit-

izenship, and the refinements of life successively find their justification in the possibilities lying in each.

The most comprehensive and all-sidedly satisfactory answer to our problem has been furnished by Fröbel. Although in time he preceded Dittes and Spencer, yet in his scheme he anticipates and includes them both. This pre-eminence he owes to his stand-point, which is that of full practical humanity. Dittes limits himself to the school-instruction; Spencer, indeed, includes the entire period of education, but approaches it as an object of knowledge only, and excludes the deeper convictions of the soul which are derived from direct inner contact with the Unknowable.

Fröbel, on the other hand, rests his scheme primarily on these convictions, as offering the only available permanent groundwork, in no way subject to the shiftings of science, which—indeed—steadily approaches the Unknowable, but can no more take its place than it can reveal its mysteries.

To him the natural and developing education is, therefore, primarily and intensely religious. It accepts without question the inner oneness of all things, and, hence, their vital coherence, as a primal fact which announces itself to our reason with axiomatic force, needing no proof beyond itself and admitting of none; an all-including self-evidence whose weakening in the slightest particular must annihilate all existence.

For phenomenal life this postulates an ever-active beginning, an ever-flowing source, an ever-efficient cause, as well as an ever-present end or aim, a rational outcome or purpose, an ever-living destiny: in short, all-sided continuity of being. Thus, to Fröbel, the natural and developing education starts with and from God; its staff is universal law; reason is its guide; its aim is God-likeness,—God-utterance.

In all proximate aims and in every particular of method, Fröbel bases his work on a thoughtful study of man-nature (respectively, of child-nature) in the gradual unfolding of its individual, social, and generic phases. True to his great principle that all outer individuality and diversity is but the expression of some inner unity, he fosters and cultivates in individual life the tendency for

social integration, and leads it to heights where the individual sees himself a conscious pulse in the vast life of humanity whose destiny is the perfection of the Father. Ever mindful of the fact that in all life the higher rests on the lower, he bestows eager and conscientious care on the lowest phases of the work; but equally mindful of the fact that the lower derives all its value from the higher, he constantly and unremittingly directs all streams towards higher and highest life. Unlike his predecessors and many of his cotemporaries and successors, he is never mired in the shallow bogs of egotistic or altruistic utilitarianism, nor ever overwhelmed by the mighty floods of feeling that pour into the soul when it beholds the Most High. Never does the schoolmaster absorb his humanity, nor the German in him—mighty as he is—get the better of his humanity. (I commend this fact to those *level-headed* gentlemen who are ever prating of *American* education as something different from *human* education.)

In the bosom of the family the child is received. Here the father's light and the mother's love are to impart to the child individual strength and self-assertion, are to lead the child to find and to possess himself, to give him self-ownership. Kindergarten and school are to teach these qualities and powers to render themselves helpful in the higher purposes of social groups, to lift him into the high art of rational self-sacrifice for a common welfare; so that life may in due time lead him to the lofty self-denial which fills with heavenly peace the soul at one with humanity and with God.

His intense religious sense takes into its service the results of physiology, psychology, history, indeed of science in all its forms. Gratefully he avails himself of whatever light and help they may give his eternal soul in its struggles with time and space. Hence, in all that pertains to the realms of time and space, he is persistently scientific. Free from all prejudice, from every idol of tribe, den, market, and theater—he seeks and tests all knowledge in actual, systematic, methodical contact with the world and with life. Knowledge, wide and accurate, is indeed indispensable to insure the world-mastership involved in man's destiny. Froebel

demands for his pupil, in gathering such knowledge, direct contact with nature and life, direct experience and experiment. He is opposed to all proxydom and vicariousness. He will not be satisfied with any second-hand men or women. Each one is to stand on his own ground, and to live out a self of his own.

Again, his education is pre-eminently practical; it tests the value of all knowledge in expression, in action, in actual life. The measure of all knowledge is its efficiency in life and for life. Knowledge must increase conscious power, and this it can do only through practice at the hand of suitable guidance, of judicious instruction. He wants not less knowledge, but rather more, and all of it living in enhanced power and strengthened practice; he wants not less instruction, but rather more, and all with a living purpose. No subject is taken up arbitrarily, but the learner wants it and demands it for his own purposes.

The very destiny of all created things lies in expression. Hence the value and importance of all that pertains to expression,—of manual activity, speech, artistic activity, conduct. *Impression*, learning, is of value only because it prepares, directs, intensifies, enhances expression, conduct. Fröbel's education, therefore, finds its gravitating center in expression, in action; it judges man less by what he may have or know, but rather by what he is and does. "Not what enters corrupts, but what goes out." His education means to give power through practice: it does not so much "learn by doing," but rather learns in order to do, "learns to do by doing."

Lastly, his education is progressively affirmative, undogmatic, recognizing inner freedom as its chief objective aim. It is forever putting out fresh buds, fresh shoots, new wood; it is in no way the tool of old time and knows not the prick of precedent; its to-day is ever a prophecy of a bright and fuller to-morrow: it is ever progressively and essentially new.

A man has no more right to say or do an uncivil thing to another than he has to knock him down—without just cause.

LONGITUDE AND TIME.

W. E. LUGENBEEL.

(A) PRINCIPLES TO BE THOROUGHLY TAUGHT.

- (1) Every circle contains 360° .
- (2) A solar day has 24 hours.
- (3) The number of degrees in any circle of latitude is 15 times as large as the number of hours in a day.

(4) Since 60 minutes of time equal one hour, and 60 minutes of longitude equal one degree; also 60 seconds of time equal one minute of time, and 60 seconds of longitude equal one minute of longitude; then, the scale being the same in both tables, the numbers representing any denomination of longitude are 15 times as large as the numbers representing the corresponding denominations of time.

(5) Hence the difference of time between two places is $\frac{1}{15}$ of the number representing the difference of longitude, and the difference of longitude 15 times the number representing the time.

(6) No two places can have a greater difference of longitude than 180° ; and, if the difference obtained is greater than 180° , the true difference is the remainder after this difference is taken out of 360° .

(7) The direction of the places from each other is changed by taking the difference of longitude out of 360° .

(8) If the place at which the time is required is east of the point of comparison, it has *later time by the clock*; if west, it has *earlier time by the clock*.

(9) If the place of which the longitude is required has later time by the clock, it is east of the point of comparison; if it has earlier time by the clock, it is west. In this case the International Date Line has no effect upon the result.

(10) If the place of which the time is required is *east* of the point of comparison and *over* the Date Line, its day is *one day earlier* in the week; if *west* and *across* the Date Line, its day is *one day later* in the week. The Date Line determines the day, but does not affect the hour, hence is not considered in the calculation until the time by the clock is obtained.

(B) ILLUSTRATIONS.

1. When 10 A. M. at A in longitude 20° and $40'$ W, required time at A in longitude 80° and $30'$ W.
 1. $(80^{\circ}-30')-(20^{\circ}-40')=59^{\circ}-50'$ difference of longitude going west from point of comparison.
 2. $59^{\circ}-50'=\frac{1}{15}$ of (59 hrs. and 50 min.)=3 hrs. 59 min. 20 sec.
 3. 10 A. M. at A—(3 hrs -59 min.-20 sec.) = 40 sec. past 6 A. M. at B.
3. . . . B has 40 seconds past 6 A. M.
1. When 3 P. M. Saturday at A in longitude 159° W, required time at B in longitude 130° E, the Date Line being between the places?
 1. 150° W + 130° E = 280° difference of longitude going east from point of comparison.
 2. $360^{\circ}-280^{\circ}=110^{\circ}$ true difference of longitude going west.
 3. $110^{\circ}=\frac{1}{15}$ of 110 hrs. = 7 hrs. and 20 min.
 4. 3 P. M. at A—7 hrs. and 20 min. = 7-40 A. M. at B.
 5. Since B is west of A and across the Date Line its day is Sunday.
3. . . . B has 7.40 A. M. Sunday.
1. When 8 A. M. at A in longitude 80° and $50'$ W, it is 1 P. M. at B; regular longitude of B.
 1. 1 P. M.—8 A. M. = 5 hrs. difference of time.
 2. $5 \text{ hrs.} = 5^{\circ} \times 15 = 75^{\circ}$ difference of longitude going east, since B has late time.
 3. $(80^{\circ}-50' \text{ W})-75^{\circ}=5^{\circ}-50' \text{ W}$ at B.
3. . . . B is in longitude $5^{\circ}-50'$ W.

MITCHELL, IND.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

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A DAY IN A TEACHERS' MUSEUM.

AS a part of the great collection of books, pictures, statuary, and apparatus, at South Kensington, London, there is a pedagogical museum. Its articles are not confined to those of English make, but include illustrative apparatus from France,

Germany, Austria, Switzerland, Belgium, Holland, Russia, Japan, and the United States. The classes of articles exhibited are school-books, maps, charts, relief-models, natural objects, and school-furniture.

I am sorry to say that the meager display from the United States gives our English cousins a very imperfect idea of the progress America has made in educational appliances. A limited supply of ruled slates, rulers, erasers, crayons, and pint-measures, from the latitude of New York City, is no fit representation of the great variety of books and appliances used between the pines of Maine and the red-woods of California, and from the wheat-fields of Minnesota to the orange-orchards of Florida.

One serious objection to the museum is that it is more remarkable for what it does not show than for what it does. Not that it is lacking in number or variety of objects, but that it is made up of apparatus manufactured in shops and factories. The real test would, of course, be the devices and appliances the teachers of the various countries make for themselves. The improvised apparatus, picked up here and there from odds and ends best suited to the wants of the hour, show far better than any polished and varnished machine-made appliances, the kind of work done in the class room.

Perhaps one ought to say that ready-made illustrations do show indirectly how work is done. But it is only by a process of induction, more roundabout than if one saw the ready-made appliances, that such objects indicate anything of the real nature of the work. In this regard, they are like those dress parade shows we have at national and state associations. There work is shown which was done at high-pressure, receiving ten times the attention ordinarily bestowed upon it, and quite often representing not more the efforts of pupils than of teachers.

The Germans are out of sight of everybody else in the thoroughness and excellence of their illustrative apparatus, and next to them come the French, who excel in some things. England excels in only one kind of illustrations—the models for drawing.

Some idea can be formed of the excellence of the German illustrations from a brief description of the leading features:—

For ancient history: half life-size pictures, in colors, of Centurian soldier, spearmen, legate soldier under tribune, legionary soldier, large pictures and plans of Roman temples, the Forum, the Coliseum, the Pantheon, large maps and pictures of Greek temples, cities, and soldiers.

Cards containing models of gems: ruby, opal, topaz, diamond, chalcedony, and turquoise, etc.

Object-lessons cabinet: containing samples of all the common grains, lentil-pea, beans, flowers and garden seeds; samples of stone of various kinds—marble, granite, quartz, slate, etc.; samples of most important chemicals, dyes, oils, and compounds; samples of wool, silk, cotton, leather, hemp, and flax, and products manufactured from them; fuels of all kinds—coal, wood, peat, coal-oil, etc. [Without enumerating further, the cabinet contains 250 samples of things in common use. It is accompanied by a hand-book, and references to authorities where information is obtainable.]

Kindergarten appliances: full and complete sets of paper-slips and splints with models for their use. [These are about the same as what we are using in America. I noticed something new, at least to me—a set of blocks with the various musical notes on them, intended to be arranged in a series and sung. Another thing new was heavy card-board cut into squares, oblongs, triangles, and half circumferences, for putting into the pupils' hands to be used in building up the letters of the alphabet.] Models for paper and splint mosaics; pea-and-wire geometrical forms; the various kindergarten gifts; cards containing words to be placed together in forming sentences in primary reading; number games, houses, baskets, boxes, bags, cups, mugs, and screens, to be made of paper by children. [Many other kindergarten appliances could be named, if space permitted.]

Model toys for girls and boys: articles of trades and occupations for one, household utensils for the other.

Object-lesson cards showing by actual sample, leather in various stages of preparation; cotton and its applications; wool and its uses; glass, its preparation and use; flax-plant and its application; silk, its sources and uses—cocoon, silk-moth, silk-worm, mulberry leaves, reeled silk, thread, raw silk, and colored silks of all kinds; the honey-bee and her industries; samples of all kinds of useful woods, polished to show the grain.

Sufficient has been given to show the excellence and completeness of the German Illustrations. They are made with painstaking care and fidelity, and are in strong contrast with those of the English, which are rendered horrid by flaming colors laid on without regard to the nature of the object. Nature does not make violet crocodiles and yellow elephants, but some school-furnishers do.

The English have budded, blossomed, and gone to seed on pictorial illustrations. For instance, one set of charts shows "the properties of matter"—impenetrability, density, expansi-

bility, elasticity, mobility, etc. Impenetrability is shown with a ringed, streaked, and striped board, into which a gory hand is driving a sky-tinted nail. Divisibility is shown by a colored representation of a drop of bog-water, magnified until the animalculæ and microscopic algæ are as large as goose-eggs, and colored like the fore and aft lights of an Ohio-river steamer. Porosity is represented to the English imagination by a toad-stool, and the center of gravity by a rainbow-tinted rope-walker balancing himself on one foot.

The French excel in printed and colored figures of plants and animals. Their pictures are no more faithful than those of the Germans, but they please the eye better, because they are more artistic. The French kindergarten display is very good. It excels in artistic crosses, triangles, squares, and the like, out of woven paper.

Only one feature of the Russian exhibit would, perhaps, attract general attention. This is a papier-maché set of representations of all the races of people in the empire, dressed out in their national costumes and showing the exact color and texture of the garments. The figures are about a foot in length. There is the short and squatty Esquimaux from Siberia, dressed in his suit of furs, and a full representation of the sledge and train of dogs that draw him over his eternal fields of snow and ice, and of his ship of the ice-desert, as well as cow, pig, and larder—the reindeer. One of the most striking figures is that of the Afghan from Russian Afghanistan, or, more exactly, perhaps, from Russian territory bordering on Afghanistan. The Russian no doubt took a devilish glee in sending this turbaned and scimitared brigand to English eyes and notice. It is very recently that the English Lion was growling and the Russian Double-Eagle screaming, each at the other, over the brothers of the Afghan robbers represented by this figure. One is impressed by the diversity of the peoples who form part of the Russian Empire. They are of all colors, sizes, and shapes, from the half Chinamen, half-Tartars of Southeastern Siberia, to the Russianized Germans of the Western part of the Empire.

Here is the most complete assortment of *abaci*—numeral frames,

for short—one could see. Our little American hand *abacus* is nowhere. It is like a jaybird among a company of storks, in size, compared, for instance, with the great Swedish numeral frame, which in place of little balls the size of buck-shot has big spools of wood, some of them six inches long. The frame itself is as tall as a man, and shows, besides counting, measures and weights—the meter, the gram, the kilogram, etc. One difference I noticed was that the Swedish and Russian *abaci* were arranged to show fractions, and multiplications, and divisions, as well as addition and subtraction. The ordinary little American hand-frame, however, used by a skillful teacher, would do the same.

But, copying the Germans, the English have made some excellent apparatus. Their rainbow-colored monstrosities misnamed maps are rapidly giving way, either to papier-maché relief maps, or to what they call photo-relief maps, which show relief by picturing it. Both kinds have laid aside the flaming yellows, greens, blues, and reds that formerly characterized English and American maps. The relief maps are very modestly colored, and the photo-relief ones are printed all one color, either an umber-brown or a sloe-black—what printers sometimes call a wine, or blue-black.

Another improvement copied from the Germans is a set of object-lesson cards, containing actual samples of the object, a picture of it, and a printed description. Some of these are—birch tree, sample of wood and leaves, and description; Scottish fir and larch; copper, bronze, and brass, with picture of a copper mine; calf (picture), calf-skin, partly-tanned leather, colored leather, and gelatine; samples of iron-ore, pig-iron, bar, steel, manufactured iron, manufactured steel, needles, pens, scissors, etc. These examples will suffice to show the direction of the progress being made.

The first generalization one is likely to make, is that objective illustration is forging ahead very rapidly. Pictures are no longer considered sufficient to convey an idea. Something of the thing itself, if possible, should be put into the pupils' hands. The practical direction of such work is shown by the fact that most of it applies to the common metals, the grains, and other food.

plants, textile materials, dyes, and the like. Geography is to be taught through the medium of the eye. For instance, one set of charts shows the characteristics of dress and home-life of the various nations and races, showing their houses, dress, cooking utensils, domestic animals, and such every-day objects. The youthful citizen of the twentieth century will not talk about the Laplanders, and think about the Jones's down at the cross-roads, or read a description of the king of beasts, and at the same time have a picture before his imagination of an overgrown sick kitten. He will be presented with some means of helping his previous experience to build views of things his eye hath not seen.

Another conclusion is that geography, or that comprehensive knowledge of climates, peoples, and products which takes in all latitudes and lands, is receiving a great deal of attention. Of course the English and Russians have great reason, from the varied and scattered nature of their possessions, to take a lively interest in it. But why should not a Yankee boy or girl go them one better on the study of geography? America far outshines either the Briton's boasted possessions the sun never sets upon, or the immense territory of the Czar of all the Russias. The United States are acknowledged to have cut the lion's (yes, even the British Lion's) slice out of the best endowed continent of the whole lot. Of late American teachers, following a fashion that has more of mode than reason, have given their attention to a vague something called literature, and another equally vague something called language-lessons. Both these are worthy subjects, but it does seem they have of late had more than their share of attention.

It should have been remarked at the beginning of this article that the exhibit is intended to be a permanent one. A department of it is given over to school books, old and new. All new books are kept on exhibition. A teacher can, without any cost, examine any new book that appears. Not only are text books included in this arrangement, but also auxiliary books, school-papers, maps, charts, etc. Unless my plan shall change, it is my purpose to devote one letter to discussing the quality of English school books, and comparing them with the procession that

is moving into the hands of American school-children. However this is tentative, and may be abandoned for something of more interest.

S. S. P.

BROMPTON, LONDON, Sept. 14, 1887.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

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SECOND YEAR READING WORK.

HOW SHALL NEW WORDS BE TAUGHT TO SECOND YEAR PUPILS?

THE first lesson in the Second Reader (McGuffey's) contains twenty words not found in the First Reader. How shall these words be taught?

The teacher may pronounce the words in order, the pupils imitating, and finally learning them by frequent repetition. But in this process, on the part of the pupil, what faculties have been called into exercise, or what power has been gained which will aid the pupil in mastering the fourteen new words of the second lesson?

Let us seek some plan which will necessitate the use of the reasoning faculties as well as the memory. The following plan recommends itself after several months' trial:

One of the twenty new words mentioned is the word *order*. Write the word upon the board, have the pupils study it for a short time, and try to find in it words, or parts of words already known. *Or* is known and can be pronounced at sight; *der* is soon seen to be a part of the word *under*, which should be placed upon the board, as soon as suggested, with the word *or*.

Now have the two words pronounced. Then have them examined with a view to determining what parts are needed to form the new word. *Un* may now be erased (at the pupils' suggestion, of course) and the parts *or* and *der* are left. Have these parts pronounced, when the word *order* will be recognized. *Stockings* is a second unfamiliar word.

After some study the pupils will recall the words: *stone, rock, sings*, as containing parts of the new word. Writing these on a line upon the board, have the letters erased which are not needed in the new word, when the parts *st-ock-ings* will remain. If all the class can not pronounce the new word at once when the parts are seen, have the parts sounded by single pupils and the class as a whole. Some are slower than others in distinguishing and imitating sounds; let such a one close his eyes and listen while others produce the sounds. When each member of the class has decided upon the pronunciation of the new word, a number may be called upon to give the word, then the class as a whole. Now it may be pointed out in the books.

It is often the case that every child except one will discover the new word. Shall another pupil be allowed to pronounce the word for him? By no means. Generally he is the very child who needs to *learn to help himself*.

When enough time has been given him and he is still unable to pronounce the word, let him withdraw for a moment to the hall, and with the door closed let the class pronounce. The pupil may now return and the lesson continue, it being understood that he may give the word at any time when it occurs to him. Often, after a very few minutes a beaming face and an uplifted hand will indicate to the teacher that a victory has been gained.

One advantage of the plan suggested is that the pupil is actually required to *think*, i. e., he must remember, he must judge, he must reason, in order to reach the desired end, the pronunciation and recognition of new words.

F. S. BURT.

SELF-ACTIVITY IN PRIMARY WORK.

NOWHERE should *activity* be the guiding principle more than in the primary grades. The young minds, with which we have to deal, are as irrepressible in their activity as the waters that rush over Niagara. We as teachers are too much inclined to disregard this natural and spontaneous manifestation of real life, and to substitute for it a kind of artificial machine, which is to show signs of life and act only when we give the stimulus; then

by and by we find fault with it because it is not ready to act when we want it to nor as we want it to.

Herbert Spencer says: "There was an age which unavoidably cherished the notion, that a child's mind could be made to order; that its powers were to be imparted by the schoolmaster; that it was a receptacle, into which knowledge was to be put, and there built up after the teacher's ideal."

While we may have drifted away from that age in theory, many have not in practice. In many cases it seems as if the moment the child enters the school-room, he is stripped of his freedom and becomes the subject of, a living wonder to him, a six-hour talking-machine. These persons would rather have the pupil fold his hands and say, parrot-like, "twelve inches make one foot"; "three feet make one yard," etc., than to take the trouble to provide him with inch, foot, and yard measures, and allow him to use his eyes and hands by providing him with something to measure, and thus allow him both to obtain and to verify the truth of the statements above presented. They say it is too much like play and causes too much confusion and disorder. But they forget that it is through this concrete material that the child is made truly conscious of the facts, and by this exercise and training his mind gains power to rightly adjust itself to other and more difficult facts.

Joseph Payne says of Froebel: "He was the first teacher to whom it occurred to convert what is usually the waste steam of childish activities and energies into means of fruitful action; to utilize what has hitherto been looked upon as unworthy of notice; and moreover, to accomplish this object, not only without repressing the natural free spirit of childhood, but by making that free spirit the very instrument of his purpose."

From this I imagine, if Froebel were conducting a class in primary number, having observed that children delight to handle objects, and knowing that number is known to the child only as he knows it in connection with objects, he would doubtless have taken advantage of this natural activity in the child's *play* and turned it into *work* with number. He would give the child work with objects of various kinds, and through this directed work they would be led to the ideas of numbers and their relations.

We can not divorce the activity of the hands in the perceptive stage of the child's development. Neither can we ignore the natural inclinations to act in various lines of work. For example, knowing that the child is constantly trying to devise and build playthings, etc., etc., for himself, we should see to it that this phase of his nature has means and opportunity for development. There are forms he can make with paper and scissors, with paper and pencil, and with clay. There are tools, buildings, fruits, animals, etc., whose form he can and will imitate with molding clay, etc., with as great delight as he makes clay marbles, or mud pies, and at the same time get the basis for much of his subsequent work in geography, number, etc.

The greatest opportunity for the teacher's activity is in supplying means for and directing the activity of the pupil. The teacher should not be impatient with the restless and seemingly mischievous pupils, for, in most cases, their eyes, hands, and minds are only impatient for something to do besides folding their hands and listening.

Jacotot evidently recognized that it is the child's nature to act and that his growth depends on it, for—"Instead of pouring forth a flood of information from his own ample store—explaining everything, and thus too frequently superseding the pupil's own investigation of it—he would do little more than, by a few judicious questions, *put them on the right scent.*" Thus allowing free scope for the pupil's own activity, by which he acquires the highest skill and power.

A. R. CHARMAN.

THE DAY'S WORK A UNIT.

In primary teaching the result of the work of the entire day as left in the minds of the pupils should in a large measure determine the plan to be followed in the work. There is one way of conducting these daily exercises, and the one perhaps most common, which makes each separate lesson a something distinct from every other lesson of the study. The exercise in reading, in geography or language has no relation to any other. The result of the day's work is that the minds of the pupils are burdened with

a multitude of facts, which to the child, and perhaps as often to the teacher, are associated in no way whatever consciously. Such a course does not give the additional power to the pupil that each day's work should give him. A great deal of what would otherwise have been useful and related knowledge has been lost through the inability of the child to make wholly his own the facts which seemed so widely different, and which were presented as if geography and language, reading and history could not find a common ground.

The great idea in the work of the day is that of having, as far as possible, each lesson supplement the others. Have one central thought for the day and group all the lessons around this. Suppose the third grade—children from eight to ten years—is studying the geographical element, *lake*, and for a certain day it is decided to make an imaginary visit to Lake George. The visit is made in the summer. The pupils go by rail. They notice the different grain-fields in one locality; the hills dotted with flocks or covered with vines in another; then the still larger hills or mountains with their beautiful and rugged scenery, and which furnish some of our most important minerals. They pass hurriedly through several of the larger cities, and are promised a special visit to Pittsburgh and New York. At the latter place the rail is left and the river route taken, noticing carefully the picturesqueness of the Hudson scenery. From Albany they again take rail and in a short time arrive at their destination. By pictures and by language they are led to see the characteristic beauty of this lake as to mountain scenery, transparency of its waters, numerous islands, and many other things that would be at most a meager description. The teacher would also present some of those features of the lake that have given it a place in the history of the United States, and perhaps as a special point of interest have them notice the high and almost perpendicular precipice—"Rogers' Slide."

This might constitute the geography lesson. Now the thought is to bring the other work of the day to bear on the same point. For a language lesson, let them give in good separate sentences what they saw on their way; the most important cities passed

on their way; something characteristic of the Hudson River; and as far as practicable the distinguishing features of the lake itself. In this way language serves its true purpose, it is the instrument of expressing the thoughts the pupils already have. For the spelling let the words be those that have been suggested by the geography and language lessons.

In most primary schools there is a short time in each day set apart for "general lessons." At this time talk of coal, iron, or Ohio's great product, wool. Then there are the few moments that are devoted to talks and readings on historical subjects, persons, and places. The smile of recognition on the children's faces as the subject for a few moments of reading—"Rogers' Slide"—is announced assures the teacher that the association of all the facts presented in the different recitations has become a conscious association to the pupils. This reading has now a two-fold interest to them. It is not only a matter of history but of geography as well.

Thus the greater part of the work of the day is left as a unit. The strong bond of association that has been thrown around the facts presented insures their better retention. This plan may not at all times seem practicable, yet a teacher with but one or two of the lower grades will be surprised to find how often and easily the entire work of the day naturally falls under one or two topics, if but a little extra thought be put upon the day's work before beginning it.

SARAH E. TARNEY.

THE BEGINNING OF GEOGRAPHY WORK.

THE great aim of all geographical work is to give the child the *power to think* in the relation of *Design*. That is of *Adaptation of Means to End, Cause and Effect*. To begin this does not require, as is sometimes supposed, mature minds and a vast fund of information. The child can make his beginning in this kind of thinking with the material around him. Since the means for personal observation is limited, if the whole field of geography is considered much must be gotten through testimony. But testimony is only realized as it is translated into terms of experience. Thus the first step in geography is to utilize the experi-

ence the pupil already has, and to incite him to increase it. His experience is with the visible world, the objects around him. These appear to him under their manifestations of *form*, *place*, and *color*; and relatively, *size*, *distance*, and *direction*. Hence form, place and color, size, distance and direction are the geographical threads in the first year.

These are to be taught, first, in themselves, thoroughly; thereby teaching the habit of exact observation, and likewise laying the foundation for future geographical work.

In the second place they must be considered in reference to the physical phenomena to which they apply. Only as thus applied have they significance to the child in a geographical, or indeed, in any respect. This does not include political geography, as the facts of this are not of so great interest to the child: having less significance in themselves, that is, less relation to the knowledge of the child at this stage, since the relations of political geography are artificial and generalized.

The great aim then in first year's work is to train the child to actually use his senses, and to reflect in the presence of the familiar geographical phenomena: to widen his range of actual experience, for upon this he must build his future work. To further this the teacher should take nothing from the child that it has not actually perceived. He must invest what the child has seen with such an interest that it will inspire the child to observe more. This will necessitate the training of the reflecting powers of the child. Through this the old will become new, and the new will be seen but the old. In this way the first year becomes a preparation for those just following. For while the second deals with that geographical phenomena that is beyond the range of the senses by pictures and language, and the first with objects of real experience, yet the first furnishes the basis for the interpretation of the pictures and language.

The teacher in the first year of the geography work must take the geographical threads, color, form, size, etc., and (1) fix them definitely as ideas, and then (2) lead the pupils to see them in their geographical application. In all this work the teacher must exclude what the pupils get from mere testimony. (3) Make the

work bear upon the animal, physical and vegetable world, and only slightly upon the political. (4) give the child the spirit of observation in respect to the familiar around him, and of reflecting concerning it.

To present the same thoughts in a somewhat different relation will set forth the nature of the preparatory work of geography more clearly. The work in the first year is two-sided.—

1. To give clear, definite, sharply defined conceptions of these fundamental ideas.

2. To follow up these ideas in their ramifications through nature. The physical world is to be studied because: (1) These fundamental ideas lead naturally to the physical world. (2) The child is not greatly interested in the political phase of geography. The work in the first year is systematic in so far as the teacher is concerned, but somewhat irregular, because it must proceed according to the actual experience of the child. By this plan of admitting only what the child himself has observed, he is trained to observe closely and to reflect upon what he has observed. And the *aim* of the work in this year should be to train to the highest degree of proficiency the powers of observation and reflection in the presence of the familiar concrete.

In the second year the geographical threads are still followed out and the work is still unsystematic in so far as the ideas and the pupils are concerned; but the knowledge which the pupil has gained through observation is to be supplemented and enriched by means of pictures and interesting stories.

In the third year as in the first the subject-matter is physical phenomena that are present to the senses; and as in the second year, it deals with physical phenomena that are beyond the range of experience. But now the subject-matter does not include any and all physical phenomena, but only the geographical elements; as, cape, ocean, island, lake, etc. And these should be taught by considering examples in different parts of the world. The *aim* of the third year's work is: 1. To give general ideas or definitions of the various geographical elements, as hill, peninsula, lake, etc. 2. To give a general idea of the earth, *without the use of the map*.

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

A GRAMMAR LESSON.

THE PRONOUN.

TEACHER. "Write a declarative sentence containing the name of an object in the room." Every pupil wrote a sentence upon his slate and stood as soon as through. Very soon all were standing. Some were then called upon to read while the others listened, with the understanding that they were to sit as soon as they heard a sentence just like theirs. Only a very few were alike. This fact made the reading of them interesting to all. Criticisms were in order, and when a mistake occurred that could be detected by ear it was noticed either by the pupils or the teacher. As they could not *all* be heard, the teacher asked each pupil to see if he had the name of something in his sentence. The sentences were carefully examined by the pupils, when the teacher said, "You may each write a sentence about the same object, and use a word for it which is *not* its name."

One pupil who wrote first, "I see a clock," wrote secondly "It is on the wall." Another, "Mary is studying," and "She will get her lesson." "John is a fast runner." "He is a good base-ball player." With a little guiding by the teacher in asking for the *first* set of sentences, all the personal pronouns would have been found in the second set, e. g., He might have asked one row to write a sentence using the name of a girl; another, the name of a boy; another, the name of some animal; another, the name of something without life; another, a name that means more than one, or a plural noun, etc.

This will make an interesting lesson, if the teacher has refused to accept such sentences as "The dog is sick"; but the end in view has not yet been reached, viz, the teaching the Personal Pronoun. The material for use has been collected by the pupils and they have had some valuable mental training in doing so.

The teacher then called attention to the fact that the word used in the second sentence meant the same object that the word

in the first object meant, and then asked the pupils to tell how they differed from those in the *first* set. This again brought an interest that it was pleasant to see. They seemed determined to find how these words differed. Soon hands and beaming faces said, "I've found it." And they had. The answer came as if it were a part of the pupil, not a thing he had learned to say so as to get rid of the teacher. The words in the first set *named* the object, while those in the second set denoted the object without naming it.

The teacher then *told* them that such words are pronouns. No definition was taught. They had no need for it. In fact the ordinary definition would have been a hindrance rather than a help, at this time. They had all they needed then, viz, "A word that denotes an object without naming it is a pronoun."

The teacher was then ready to take up the next lesson and show that there are classes of pronouns, and show on what basis the classification is made.

OPENING EXERCISE.

AFTER singing an appropriate song, it is often well to read a little poem or other selection, and if this calls forth any remarks from either pupils or teacher they should be heard. It is a good sign for pupils to show a desire to say something about what is read to them. It is also encouraging when a teacher says something of an uplifting nature, when he says it because he can not help saying it; but nothing is more deadening than to force pupils to talk, or for a teacher to force himself to do so. The following is one of the kind of selections referred to:

NO TIME LIKE THE PRESENT.

If you're told to do a thing,
And mean to do it really,
Never let it be by halves;
Do it fully, freely.
Do not make a poor excuse,
Waiting, weak, unsteady;
All obedience worth the name
Must be prompt and ready.

If you're told to learn a task,
And you should begin it,
Do not tell your teacher, "Yes,"
I'm coming in a minute."

Waste not moments nor your words
In telling what you could do
Some other time; the present is
For doing what you should do.

Don't do right unwillingly,
And stop to plan and measure;
'Tis working with the heart and soul
That makes our duty pleasure.

—*Phæbe Cary.*

No element in a person's character is more valuable in the "business world" than promptness. No banker could succeed without it. A merchant must be prompt, and must require his clerks and customers to be so. A lawyer must attend to his business promptly. The physician must go promptly when called. Railroad trains must be on time, and so must the people who ride on them be on time. Since we "study for life and not for school," pupils should learn to be prompt by being prompt in all their school work.

A person who has to run to catch the train—gets there only by the "skin of his teeth"—is not on time; he is not prompt. A pupil who rushes into the school building, and goes up the stairs two steps at once, and *just* gets in, is not on time. He is forming the habit of putting things off. He is not forming the habit of promptness. He is living up to the letter, but not to the spirit. Be prompt in all things. G. F. B.

READ A STORY.

READ a story to your pupils, and afterward place some words taken from it on the board. The next day have pupils use the words in sentences. The following will serve to illustrate this plan:—

SELF-PRAISE.

Let another man praise thee, and not thine own mouth.—Prov. xxvii, 2.

A man once walked along the banks of the mighty Euphrates River. Its waters moved softly and silently along. "Why do not thy waters surge and roar?" asked the man. And the river replied: "I need not shout aloud; my name is known widely enough. The green meadows which I water and the lofty trees upon my banks—these tell who I am."

The man came afterward to the banks of the Tigris River. Its waters dashed along wildly and with clouds of foam. "Hallo, how loud you are shouting!" said the man. "Ah," said the river, "my shouting does not help me at all! I still am not praised like other streams, however loudly I proclaim that I am something in the world."

The man went further. He saw trees with the costliest and most beautiful fruit. They offered their fruits without a sound. "Why so still, good trees?" he asked. "Why not rustle like your companions in the wood?" "We are known," they replied, "by the fruit we bear, however silent we are." Soon the man came to a wood whose trees towered to the skies, and whose empty crests kept up a constant roar. "Why do you make such a noise?" he asked. "Ah," they replied, "we have shouted loud and long, and yet we are not treated as we deserve."

"Now I know," said the man, "who praises himself amounts to nothing. The truly meritorious require no self-praise. That truth I will not forget."—*Jewish Messenger*.

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|--------------------|-----------------|
| 1. Euphrates River | |
| 2. waters | 3. surge |
| 4. Tigris | 5. dashed |
| 6. shouting | 7. fruit |
| 8. trees | 9. rustle |
| 10. companions | 11. towered |
| 12. crests | 13. self-praise |
| 14. truth. | |

SHORT NOTES.

LETTER WRITING.

We are often surprised and sometimes disgusted at the efforts of children to write letters. We should be neither surprised nor

disgusted. Think how seldom they write letters, and when they do write it is a "pretend-like" sort of an affair. Why not encourage them to write real letters to "sure-enough" people? Have them write to Uncle John or Aunt Mary. Offer to correct the letter for them, and take some interest in the correspondence yourself. Nearly every teacher has some written work done every day. Why not have it done in the form of a letter? We once tried it for a month with good results. It was something like the following:—

JONESVILLE, IND., Oct. 16, 1887.

JOHN SMITH,

Dear Teacher,

The following is my arithmetic lesson for to-day:

.

Respectfully,

MARY BROWN.

MAP DRAWING.

Maps should not be drawn in school as a work of art. The map of any state should be drawn on the board in three or five minutes. The map should show that the pupil has a good idea of the shape of the state, and the locality of its principal rivers, towns, etc.

UNIQUE SPELLING LESSONS.

A teacher recently gave fifty words, such as a grocer's boy would be called upon to use in taking orders, a housewife or a servant girl in giving the same. They were written upon the board in columns, then copied by the children, and the dictionary consulted by each pupil to see if there were different spellings allowed for any word, and so discover the best meaning of the word. After the spellings of the word had been learned, each pupil made store orders, or made charges on memoranda, until he had used in these ways every one of the fifty words. This tested their knowledge of the meaning, the spelling, the method of measuring, and a reasonable price.—*Journal of Education*.

PERCENTAGE AND ITS APPLICATIONS.

The subject of percentage is simply a continuation of fractions.

The expression of any per cent. is always the expression of an abstract fractional number. Six per cent. not only means, but is $\frac{6}{100}$. It is the indication of a fraction, of which 6 is the numerator and 100 the denominator. To teach these facts to the beginner is not an easy task, but until they are entirely apprehended and appreciated, he will make little intelligent headway in the subject. To this end a number of exercises and expedients may be employed.

Show the pupil that $\frac{4}{100}$, .04, and 4 per cent. are equivalent expressions; that the problem, What is 8 per cent. of 40? is exactly identical with the problem, How much is $\frac{8}{100}$ of 40? Give them many exercises, both oral and written, in reducing common fractions to the decimal form, carrying the division to two decimal places.—D. S. WRIGHT, *Iowa Monthly*.

PASSING PENS, PENCILS, ETC.

Much time is worse than wasted in this work. It often takes five minutes for some schools to get ready to draw. One sweet, light-footed little girl passes a pencil to each one of 56 pupils, and another passes the erasers, while the rest sit with folded hands. Then the teacher lays the books in bunches on certain desks and "counts" them out, somewhat as follows: "One," and all but one book are put on the desk at the right. "Two," and the act is repeated. "Three," and third row is reached. This seems well on paper, but some careless fellow doesn't move when the teacher says *Two*, so books must all be laid back on the first row on this account. A very little ingenuity will enable a teacher to accomplish all this in *one minute*.

Place books and pencils on front desks. Have pupils occupying front seats take books and lay them on left arm and take pencils in left hand. Lay a pencil on each desk as they pass to the back of the room. Lay a book on each desk as they return. Do not collect the erasers. They can be kept in the pupil's desk. There are many other plans as good as this. Don't count for them to lay pencils and books down; let them walk across the floor like people, not like a lame goose. The sun will rise in the east the next morning even if they do not keep in exact "line."

COUNTRY SCHOOL DEPARTMENT.

[Conducted by W. H. CAULKINS, Supt. Tippecanoe County.]

—:O:—

IRREGULARITIES IN GRADING.

THE aim of a graded course of study is to keep the pupil equally advanced in the different lines of school work. When he has reached a given stage of advancement in reading, he should be at a certain definite stage in arithmetic, in geography, in language. A graded course does not essentially consist in accomplishing a certain quantity of work in a certain time. Such a condition is of course needful in cities, where large numbers of children are disposed of; but in the country, it seems to us, such a limitation is not needed. Removing this consideration and holding fast to the idea that a graded course first of all correlates the lines of work, the difficulties in the way of grading and keeping graded the country schools become few in number. So long as townships in the same county vary from five to eight months in the length of their school terms, nothing like a uniform quantity of work per year can be laid down; but it is possible, notwithstanding this difference in the length of time, to keep the schools all uniformly graded, e. g., it is possible to keep pupils from being in the fifth reader and the primary arithmetic at the same time.

The first obstacle to overcome in the grading of a school is irregular attendance. It is true pupils fall behind as much in one study as in another, but the real difficulty lies in the fact that they do not understand the following lessons so well. Another trouble is the late entrance and the early withdrawal of the larger pupils, boys especially, and the dropping out of the smaller pupils in the severer months of the winter. Added to these is the varying ability of pupils, which of course interferes equally in all graded courses. So much on the part of the pupils; on the teacher's side, the chief difficulty is the diverse ideals teachers have of what constitutes a graded course, and the consequent ideas they have of the surmountability of such obstacles as lie in the way.

It is presumed that every teacher understands how to obtain

good attendance and how to make sure that missed lessons shall be made up. Starting with the ideal we have formed at the beginning of this article as to what constitutes a graded course, let us consider each of the remaining hindrances. First, is it not practicable to ascertain definitely how many pupils in the neighborhood will be late in starting, what grade of work they will be prepared to take, what their ability is, and from these data determine whether it would pay to hold back a grade on their account? Supposing they have average ability, can not they be pushed a little when they do start, and by this means kept in their proper place? Would the time be wasted in fixing more firmly in the pupils already present the principles of the work passed over, or would it be thrown away on supplementary work?

The matter of difference of ability in the pupils is inherent to all schemes for grading and may be disposed of in saying that a regulated supply of supplementary work for the bright ones will solve it as well as it can be solved. There remains but the one difficult question,—What shall you do with pupils who are very much behind or ahead already in certain branches through lack of previous grading? Here is a boy in the fourth reader and primary arithmetic; a girl in the complete geography and the history and has never had any language lessons; what shall you do with such cases? We should consider, primarily, the *ability* of the pupil. It often happens that a pupil can be placed much higher on his ability than he could on an examination-grade, and in every such case we think that if raising him in one or two branches will make him regular in his grade, it would be the best thing to do. Supposing, however, that in place of being behind, he is ahead of his grade in one or two branches, it would be an easy matter to make him do work equivalent to the regular work. It must be recollected that not all pupils will get the same amount of good out of any study, and when a boy has derived all the benefit he can from one year's work he ought to be advanced, even though neither his attainments nor his ability warrant it. Such cases must be pushed along and allowed to receive as much benefit as possible by absorption, since they will get but little any other way. By a judicious balancing, as it were, of the process

of pushing and spurring with the process of holding back, we think any country school with only a few irregular cases can be made perfectly regular.

In case the school is completely demoralized, the only possible way is to classify the pupils as nearly regular as possible, and to allow the irregulars to remain irregular; taking care, however, that new pupils are kept perfectly regular. By leaving a complete record of the work done, the succeeding teacher will be enabled to follow the same plan, and in the course of eight years, the time of a school generation, all the irregulars must necessarily be worked out. The chief requirements, it is to be seen, are organizing skill on the part of the teacher, complete records of the work accomplished, and the adoption of a uniform plan of grading among teachers.

W R I T I N G .

PERHAPS nine out of ten of the country school teachers will say that the greatest obstacle in the way of successful teaching of writing, is the lack of materials. Sometimes this is the result of inability of parents, but more frequently it is by reason of carelessness or indifference. It is safe to say that during a six-months' term of a country school the average scholar does not recite or practice more than one-half of the regular writing exercises.

To prevent so great a loss of time, two or three township trustees of a certain county, last year, furnished copy-books, pens, and ink. The copy-books were bought at a discount of twenty-five per cent., the ink for \$1.50 per gal., and the pens for about one-fourth the retail price. The teachers made regular monthly requisitions for supplies. The copy-books, when filled, were returned to the trustee's office. At the close of the term the books belonging to each school were filed in a separate package, and were open to the inspection of the public.

The result was most satisfactory to the teachers and pupils, as the universal verdict was, "We never saw so much improvement in one term." The poor man with a number of children to provide for is relieved of quite a financial burden.

Those who object to the plan are the rich, childless tax-payers, who think it an outrage to tax *them* to educate other people's children, and the country and village store-keepers who lose a little custom.

THAT HORRID REVIEW.

BY TILLIE CASON.

One day, as I wandered, I heard a complaining,
And saw a young lady the picture of gloom;
She sat in the sunshine, her bonnet disdaining,
And looked like a convict led out to her doom.

"O lady," I cried, "pray why do you sorrow?"
This world has some dark, dreary days it is true;
But take in the sunshine, no thought for the morrow."
She said, "Have you heard of that horrid review?"

"Why no! What can that be?" I cried in amazement.
My thoughts to a thousand calamities flew.
She answered: "Now where have you been all these days ma'am,
That you have not heard of that horrid review?"

You see, I'm a teacher. Five years I've been toiling.
Of new fangled notions, I've seen not a few;
In winter snows wading, in summer sun broiling,
But naught to compare with that horrid review.

The times I've attended that Normal at Cranktown,
The lectures I've heard, 'til I grew deaf and dumb,
The methods I've conned, the outlines I've copied,
Would make in addition a very big sum.

The pay I've received, it is shameful to mention,
My toes and my elbows are both alike, through;
I've nothing to wear to the teachers' convention,
And now I am asked to please write a review.

Because, you see, we've a new superintendent,
They say it ain't his fault, and may be its true;
But true or untrue he's quite independent,
And says that we *must* write that horrid review.

And suggests David Copperfield, whoever he is,
And talks of Charles Dickens, of him I have heard;
And what do you think that his very best plea is?
"All this is ordered," he says, "*by the board.*"

"I quite understand now," I said. "Tell me whether
'Tis true that the grades are increased ten percent?"
She stared at me wildly, her hands pressed together,
Unable in words, her surprise to give vent.
She gave up the ghost, and they carved on the marble
They bought with the last of her earnings then due
And placed o'er her grave, where the little birds warble,
"Ye pedagogue. Victim of horrid review."

EDITORIAL.

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WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another: we can't do it. We will change as often as asked to do so, but must be notified of each change.

ERRATA.—In the article entitled "Education," in Sept. Journal, page 523, read the last word of the second paragraph "*eductors*" instead of educators. In the last line of the same article read, "Not, perhaps, less *eduction*, but more education."

THE PROGRAM of the State Teachers' Association is about completed and is a strong one. Prof. Swing, of Chicago, will give the principal evening lecture. The program will be printed in full in the December number of the Journal. The attendance ought to be large. For special information address Geo. F. Bass, Indianapolis, chairman of executive committee.

ADVERTISEMENTS.—Occasionally a reader of the Journal objects to the advertisements. Were it not for the advertising patronage the price of the Journal and of all other papers would have to be increased. Furthermore, the advertisements are profitable reading. If you have not read the advertisements in the Journal do so and have an accession of knowledge. Look especially at the new ones.

VOLAPÜK, as before stated in the Journal, is the name of a new language which is "called" universal. This language was constructed by Johann Martin Schleyer, and first published in 1879. It is claimed that over 500,000 persons have already acquired the use of it. "Its grammar contains comparatively few rules, and these are all exact, without any exceptions." C. N. Casper, of Milwaukee, proposes to publish a book prepared for English students, with key, etc. Although Volapük is "all the rage" just now, the Journal has no faith that a language "constructed" by an individual will become *universal*.

LITERARY SOCIETIES.—This is the time in the year for the organization of literary societies and reading circles. A teacher can do much and ought to do something in directing the reading and the literary tastes of the young people of his school outside of what he may do in the regular school work. A literary society, if properly directed, may be made a means of much reading and research, as well as of much experience in writing and speaking.

Small reading circles can be organized in almost every neighborhood where there is a *leader*. These suggestions are not simply theory, they are based on what has been done, and what is being done.

TREE PLANTING.—This is perhaps the best month in which to transplant trees. There is no good reason why all school premises, especially those in the country, should not be liberally supplied with shade trees. The native trees, which are the most desirable for every reason, are always near at hand and can be had for the digging. Perhaps it is the duty of trustees to attend to this ornamentation of the school grounds—doubtless it is, but if they do not do it, then it becomes the teacher's duty to urge them to do it—and this failing it is his duty to set apart a Saturday, or if the trustee will agree to it a Friday afternoon, and with the co-operation of the older pupils and parents fill and surround the school grounds with trees. They will become things of beauty and a joy for ever. Let the *third* Friday or Saturday of Nov. be the day.

VOLUNTARY PAPERS IN THE STATE ASSOCIATION.

The following letter appeared in the *Indianapolis Journal*, November 10, 1886:—

To the Editor of the *Indianapolis Journal*:

May I make a suggestion through the *Journal* concerning the program of the State Teachers' Association? At present the persons who appear before the association are those who are well known throughout the state, or are personally acquainted with a member of the committee on the arrangement of the program. This gives no opportunity to the majority of the 13,000 teachers of the state to be heard, even if they have something to say. Moreover, some of the papers presented

are valueless, people writing at times either because they are asked, or because they wish to get their names before the public, and knowing that no censorship will be exercised in regard to the presentation of papers.

The following plan works so admirably in several scientific societies of the United States that its adoption could hardly be considered in the light of an experiment. Next year, if not feasible this year, set aside one day of the association and a half-day of the high school section for the reading of voluntary papers. Appoint a committee to receive and examine such papers in full, or abstracts of them, before the day of reading. Of the papers presented let the committee select those that are of the greatest excellence.

Is it too much to expect that this will increase the usefulness of the association, since we shall hear from the people who speak because they have something to say?

LILLIE J. MARTIN.

HIGH SCHOOL, *Indianapolis*, Nov. 3.

Mr. Griffith, of Frankfort, introduced a resolution at the last meeting of the association favoring the merit system of selecting papers and recommending the system to the careful consideration of the various committees having in charge the programs of the next session. In accordance with this resolution, the high school section has decided this year to give place to two such papers. If this proves even moderately successful, it would seem desirable to give at least a half-day of the general meeting to papers selected in this way.

Miss Martin has suggested another modification in the preparation of the program which she certainly has great faith in. She would like to see the State Teachers' Association follow the Indiana Academy of Science, and for a half-day of the general meeting let any one talk who has anything to say, merely asking him to send the subject of his remarks and the time he would require to the committee. She sees, of course, that only a short time could be allowed to each, and that the papers would have to be grouped or confined to certain subjects.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR SEPT.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

READING.—1. What evil results from the erroneous idea that punctuation is intended to guide the voice rather than show the sense?

2. What is the word method? The phonic method? When should the phonic method be used in teaching small children?

3. What assistance should a *first reader class* have in preparing for the next recitation? How should this be given?

4. How should the *teaching of reading* in the primary grades differ from the teaching in the advanced grades?

5. To what extent does the cultivation of the ear enter into oral reading?

6. What things would you consider when presenting a reading lesson as a study in *literature*?

7. What are rhetorical pauses? What determines them?

[15% off for each one incorrectly answered.]

GEOGRAPHY.—1. Bound Oregon. Locate its capital and its metropolis.

2. Explain the relations of day and night at the Arctic Circle.

3. Why are very high mountains snow-covered?

4. What are the chief seaports of Brazil?

5. Name the five chief seaports of the Atlantic coast of the United States.

6. Where are Mount Vesuvius? Mount St. Elias? Black Mountains? The Matterhorn? Mount Cotopaxi?

7. What is the form of government of Central America?

8. Describe the line of the proposed Nicaragua Ship Canal.

9. What is the population of the United States?

10. What is the direction of the course of the Gulf Stream? Explain the causes of this direction.

PHYSIOLOGY.—Write fully on the topic, "Circulation and Aeration of the Blood." Follow this outline:

I. Systemic circulation—

1. Organs of.

a. Special structure of each.

2. Process of circulation—

a. Direction of current.

b. Changes of the blood during its circuit.

II. Pulmonic circulation—

1. Organs of.

a. Special structure of each.

2. Process of circulation—

a. Direction of current.

b. Changes in blood during the circuit.

ARITHMETIC.—1. 2 casks contain equal quantities of vinegar, from one are drawn 34 qts. and from the other 20 gals.; one cask now contains twice as much as the other; what did each contain at first? Analyze.

2. A person bought 30 lbs. of sugar of two different qualities, part at 10 cents and part at 7 cents a lb; he paid for all \$2.94; how many pounds of each did he buy? Analyze. 3, 3, 4.

3. A man received 30 cents a cubic yard for digging a cistern 36 ft. long, 27 ft. wide, and 18 ft. deep, and then sold the earth at \$1 for 100 cubic ft.; what did he receive in all? 5, 5.

4. If the interest on \$900 is \$162, what will be the interest on \$1500 for $\frac{2}{3}$ the time at $\frac{1}{3}$ higher rate of interest? 5, 5.

5. A merchant imported 10 pipes of wine of 125 gals. each at \$3 per gal.; he was allowed 5% for leakage; what was the duty on the remainder at 30% ad. val.? 5, 5.

6. The property of a city is valued at \$45,000,000, and the number of polls is 11,000; what rate of tax must be assessed to collect a net tax of \$445,500, allowing 1 per cent. for collection, and each poll paying \$2? 5, 5.

7. A note of \$1,000 due in 6 months, with interest at 6%, was at the end of 4 months discounted at the rate of 8% true discount; what were the proceeds? 5, 5.

8. A and B started from the same spot to walk in opposite directions around a race course 2,250 ft. long; their steps were each $2\frac{1}{2}$ ft. long, but A took 5 steps to B's 4; how many feet had B walked when they met? 5, 5.

9. A pile of wood is 32 ft. long, 16 ft. wide, 8 ft. high; what will be the length of the pile if made into a perfect cube? 5, 5.

10. A vessel at the equator sailed west 40° , then 30° north; how many geographical miles was it then from the starting point? 5, 5.

ENGLISH GRAMMAR.—1. What are the essential elements of the sentence, and why called essential?

2. State the likeness and the difference between a clause and a phrase.

3. What are the classes of common nouns? Give an example of each class.

4. In the following sentence what grammatical properties of the pronoun *whom* can be determined from the pronoun itself, and what from its relation to other words? He is a free man whom the truth makes free.

5. What gives rise to the comparison of adjectives?

6. a. Neither he nor they *were* there.

b. Either he or I *am* going.

Justify the form of the verbs in these sentences.

7. What verbs do not have voice? Why?

8. Correct the following sentences, and give reasons for the corrections:

a. Washington threwed up an embankment and attacked the enemy.

b. I like him better than all the rest.

9. Analyze: The scouts report to Cæsar that the camp of the *enemy* is five miles distant.

10. Parse the italicized words in the foregoing sentence.

U. S. HISTORY.—Write a sketch of the administration of George Washington, including the condition of the country in politics, finances, industry, and education during that period.

SCIENCE OF TEACHING.—1. Define memory, imagination, fancy, phantasy.

2. Explain this principle in education: "Teaching, both in matter and method, must be adapted to the capability of the taught."

3. What are the purposes of the recitation? Of what processes may the recitation consist?

4. What are the legitimate objects to be accomplished by opening or devotional exercises in the school?

5. What advantages has the laboratory method of teaching physiology? Is this method practicable in the common schools, and to what extent?

ANSWERS TO PRECEDING QUESTIONS.

HISTORY—Washington became first President of the United States by a unanimous vote, and began his first administration with the country almost of one political party, the Federalist. This, however, soon changed, and the Anti-Federalist party, with Jefferson, then Secretary of State, at its head, became more and more powerful. The intrigues of the French created disturbances likely, at times, to cause serious and permanent trouble for the administration and the country; many members of the old military cabal fomented these troubles, partly in opposition to Washington, but mainly to promote their own personal ends. The cool prudence and wisdom of Washington saved the country from these evils, and his personal enemies were, in many cases, regarded as the enemies of the country, and treated accordingly. The Federalist party, however, gradually weakened, and at the end of Adams' term was virtually annihilated.

In finances the country was on the verge of ruin; under the Articles of Confederation, Congress was to all intents and purposes completely powerless to pay or cause to be paid the public debt. With a surprising wisdom Washington placed Hamilton at the head of financial affairs, Congress adopted the new Secretary's recommendations for the assumption of the State debts, the creation of a mint, the erection of a National Bank, and a judicious system of taxation, general and excise. From despondency to confidence the change was rapid and effective. Bad and foreign coinage disappeared and was replaced by an American currency of gold and silver. The lands which had be-

come public property by cession or other means, ~~was~~^{are} placed on the market, and yielded large sums applicable to the needs of the country. The excise tax on whisky, after the whisky insurrection of Western Pennsylvania was quelled, produced considerable sums, the daily vocations of life became quiet, peaceful, and successful, and new lines of industry were developed. The opening up of the western lands to occupation on soldiers' warrants, and to purchase by the citizens at large, rapidly increased the agricultural interests and rendered those interests of prime importance. The cultivation of the cotton plant became a source of great profit and political significance to the Southern States, especially after the invention of the cotton gin by Eli Whitney, a Yankee school teacher who migrated to Georgia. This new condition of things created a demand for slave labor, which was fostered by the desire of the North to rid themselves of what had become a serious incubus.

Commerce and sea-carrying became interests of great importance and profit. The stars and stripes became familiar on all seas, and a reputation for far-seeing and indomitable energy on the part of American seamen became world-wide.

But little was done during this administration towards a system of public education. In New England the schools already in existence were continued and improved. The Northwest Territory, under the Ordinance of 1787, was compelled, as occasion arose, to provide for education, was forbidden to hold slaves, and made forever free from religious enthrallment, every man being left to worship God according to his own conscientious beliefs. But the people were being rapidly educated by the power of circumstances and the force of events. Self-directing, free in mind and body, they grew into the full appreciation of the wisdom and necessity of a sound, general, and liberal education.

READING.—1. Pausing only at the punctuation points, thus ignoring rhetorical pauses; measuring the length of the pause by the character of the punctuation point; reading from a mechanical basis instead of from the basis of the thought or feeling of the passage.

2. The Word Method of teaching children to read begins with the words as wholes, as types or forms for ideas already communicated to the child-mind, with the design of enabling it to pass quickly through the symbol to the idea or thought symbolized. It may be followed or associated with the Alphabetic Method, in so far as the Alphabetic Method is an analysis of words into the names of the letters composing them; or with the Phonic Method, in so far as the latter is a separation of the word into its component sounds. There are wide differences in the opinions of teachers as to the best time to begin the Phonic Method,—some thinking it should begin and be closely associated with the Word Method, others that it should only be introduced when

the child is old enough to begin the use of the Dictionary. Where it is to be used at all, the majority hold to the former opinion.

3. It is important, not for the First Reader class only, but for all reading classes, to have a clear conception of that to which they are to give oral expression, and whatever facts, incidents, interesting stories, etc., etc., may be necessary to thus awaken and stimulate the pupils, should be given. To this end, that which is to be read should have meaning to the child, and attractiveness for him. He should not come to the class in a condition to stumble over the form of either a new or an old word, or to blunder over the meaning; nor should he come to the class to say, "Johnny stopped too long at the period," "Mary let her voice fall at the semi-colon," "Susie called 'house' *horse*," etc.

4. In the primary grades the purpose of teaching reading is to teach the child *to read*, i. e., to give it mastery over the forms or symbols employed in the expression of thought. In the more advanced grades the purpose is more particularly to teach *the interpretation of reading*, i. e., to enable the pupil quickly to grasp the thought put into word-symbols by others. The difference in the purpose indicates the difference in the method. How and when the transition from the one to the other as the primary object is to be made, is a matter of conditions in the class.

5. To a very considerable extent. The power to distinguish the delicate shades in tones naturally leads one to observe those shades in his own voice, for he has learned to appreciate their value.

6. *a.* The character of the selection; *b.* possibly, its author; *c.* possibly, its location, especially if descriptive or narrative; *d.* the general thought or sentiment of the passage; *e.* the special points through which this general thought or sentiment was unfolded; *f.* beauties or defects; *g.* force, bearing or moral of the selection, etc. Answers to this question are necessarily general, so much depends upon the selection, the time, the place, etc.

7. Pauses in the oral expression, determined by the thought or emotion to be expressed.

PHYSIOLOGY.—1. The organs of the *systemic circulation* are the heart, arteries, capillaries, and veins. The heart is a two-sided muscular organ, each side being composed of two chambers, and the sides not communicating after birth. The lower chambers, termed ventricles, have thick walls; the upper ones, termed auricles, have thin ones. The difference in the thickness of these walls is due to the difference in their functions. Both arteries and veins are composed of three coats, the middle coat being muscular, and, in the former, stronger and more elastic than in the latter. Arteries have no valves; veins have. Connecting arteries and veins are the capillaries, thread-like tubes of a single coat, so thin as to allow of a free asmosis of the liquids within and without.

The blood flows from the heart in the arteries, towards the heart in the veins, of the systemic circulation, excepting in the portal vein, which carries the blood temporarily through the liver.

In the capillaries and in the liver there is a change in the character of the blood. The former is due to the growth and waste of tissues primarily; the latter to the separation from the blood of the elements of bile and glycogen.

2. *Pulmonic circulation* is carried on through the pulmonic arteries and veins, extending from the heart to the lungs, and through the capillaries of the lungs. Assisting it in the accomplishment of its purpose is the act of respiration. The current flows to and from the lungs. The opposite change takes place in the lungs from that in the capillaries of the systemic circulation, for here it is purified.

ARITHMETIC.—1. For convenience, call one A and the other B. 20 gal. = 80 qt. We take 80 qt. from A and 34 qt. from B. We took 46 qt. more from A than from B, when B contains twice as much as A. Then 46 qt. = $\frac{1}{2}$ what B contains, or 92 qt. Then B contained at first 92 qt. + 34 qt., or 126 qt. Since, by the proportion, they contained an equal amount at first, they must have contained 126 qt. each.

2. 30 lbs. at 10¢ will amount to \$3, which is 6¢ too much. 10¢ is 3¢ more than 7¢, so he must take as many pounds at 7¢ as 2¢ are contained times in 6¢, which is 3 times. Then he will take 28 lbs. at 10¢ and 2 lbs. at 7¢.

$$3. \frac{36 \times 27 \times 18 \times .30}{27} = \$194.40.$$

$$. \frac{36 \times 27 \times 18 \times 1}{100} = \$174.96.$$

$$\$194.40 + \$174.96 = \$369.30.$$

$$4. \begin{array}{r|l} \$900 & \$1500 \\ 1 & \frac{2}{3} \\ 1 & \frac{1}{3} \end{array} : : \$162 : (\quad)$$

Answer, \$240.

$$5. 125 \times 10 \times .95 \times 3 \times .30 = \$1068.75, \text{ Ans.}$$

6. 99% of \$22000 = \$21780, raised by poll. \$445500 — \$21780 = \$423720, which is 99% of \$428000, amount to be raised by taxation. \$428000 ÷ \$45000000 = .0095 +, or $9\frac{1}{2}$ + mills, rate.

$$7. \$1000 \times \$1.03 = \$1030, \text{ amount due at end of 6 months.}$$

$$\$1030 \div \$1.01\frac{1}{2} = \$1016.44, \text{ Ans.}$$

$$8. 5 \times 2\frac{1}{2} \text{ ft.} = 12\frac{1}{2} \text{ ft.}; 4 \times 2\frac{1}{2} \text{ ft.} = 10 \text{ ft.}; 12\frac{1}{2} \text{ ft.} + 10 \text{ ft.} = 22.5 \text{ ft.}; 2250 \text{ ft.} \div 22.5 \text{ ft.} = 100; 100 \times 4 \text{ steps} = 400 \text{ steps}; 400 \times 2\frac{1}{2} \text{ ft.} = 1000 \text{ ft., Ans.}$$

$$9. \sqrt{16 \times 8 \times 32} = 16 \text{ ft., Ans.}$$

$$10. \sqrt{40^2 + 30^2 \times 69\frac{1}{2}} = 3458\frac{1}{2} \text{ miles.}$$

There was a mistake in the solution of the 7th problem in last issue. It should be $\frac{8 \text{ ft.} \times 3}{2} = 12 \text{ ft.}$

Have received the following criticisms and suggestions. We gladly give them space. The second answer to the 5th of last month we are led to believe would be accepted by the State Board. We are not so certain about the second.

Answer to 5th problem in last issue: Because every such change involves as many tens, or powers of tens, as the difference between the original and the changed numbers involves two or more digits, less that difference in the digits, and therefore so many nines.

WINAMAC, IND., Oct. 13, 1887.

W. A. Bell, Esq., Editor School Journal, Indianapolis, Ind.:

DEAR SIR—Our teachers are not satisfied with the answers to the questions of the State Board, at the August examination, as they appeared in the Journal for October. Sir, as a great number of the teachers depend upon the answers as they appear in the Journal to be the ultimatum, why was the 5th question omitted?

Take this number:— 91

Reverse its digits:— 19

9)72

8

The reason is simple, i. e., the number in the first place is one, in units' place, and 9 in tens' place. Now reversing the order, we have 1 in tens' place and 9 in units' place. Then we have 1 in tens' place or 10 — 1 in units' place, divisible by nine. Again in the second set we have 9 in tens' place and one in units' place, or 90 — 9 = 81, which is divisible by nine; hence, it is very plain.

We do not believe your answer to problem seven. You have a triangle whose area may be 50 ft. or 12 ft. or 10 ft., as you say, but we do not see it that way. We see only 5 different triangles in that figure and none of them with an area of ten feet.

It does seem to us that you have a very simple way of going from the known to the unknown. It may be very simple to you; to us it is more than complicated, it is abstruse.

What do you think of a teacher who would ask his pupil to name all the States in the German Confederation, notwithstanding the fact that the pupil only the day before had been made to repeat the names until he was dazed?

Yours truly,

J. H. REDDICK, *Co. Supt.*

C. H. PETERS, *Teacher City Schools.*

SCIENCE OF EDUCATION.—1. Memory is the power of retaining and reproducing any thing that has been impressed on the mind, whether by way of the senses or through the medium of language.
—Sully.

Imagination is the power of the mind to recombine or construct anew the materials furnished by the past.

Phantasy is that form of representation in which the mind is a spectator of a series of images severed from the usual relations of cognitions; the effect is grotesque.

Fancy is the imagination limited to sense-perception.

2. During the first years of school life the most active power of the mind is sense-perception, therefore the matter presented should be such as to appeal principally to this power. Later imagination, judgment, and inductive reasoning are more active. These require another change in the matter and method presented. Again creative imagination and inductive and deductive reasoning become the leading activities of the mind, when matter that requires these powers may be presented.

3. To test the pupil's knowledge. To test his power to use the knowledge he has acquired. To give explanations and suggestions that will enable him to learn what is to follow.

4. To establish and strengthen a love for the good, and to place the pupil and teacher on common ground so far as the aim of the school is concerned.

5. The facts are gotten first-hand instead of second-hand. This is always an advantage. The common schools can easily examine the bones, heart and lungs, stomach, and many of the muscles, arteries and veins.

Corrections.—In the 2d of last month the word *heating* was accidentally omitted.

By sight a child can get, in addition to what was named last month, the fact that an orange is circular one way, and its relative size.

A correspondent sends the following: "I think the answer to the third bad reasoning. It does not follow that a child can gain 99% to 1% by writing his spelling simply because 99% of the utility is in writing. Nothing could be more fallacious."

The correspondent forgets the question and misinterprets the answer.

THE ANSWERER.

GRAMMAR.—1. *a.* The essential elements of the sentence are subject and predicate. *b.* A complete thought can not be expressed without them.

2. *a.* They are alike in that each is a subordinate element in a sentence and may represent a single part of speech. *b.* They differ in that the clause contains a subject and predicate, while the phrase does not.

3. (1) Class names; as, boy, horse, book, etc.
- (2) Collective nouns; as, committee, army, flock.
- (3) Abstract nouns; as, goodness, beauty, hope.
- (4) Verbal nouns; as, reading, to study, etc.

4. The gender, person, and number are determined from its antecedent *man*; the case, from its form as well as from its relation to other words in the sentence.

5. Comparison arises from the fact that the qualities or attributes expressed by the adjectives may exist in different degrees.

6. *a.* When one of two subjects, connected by neither—nor, is plural, the verb is generally placed next to and agrees with the plural noun. *b.* The verb often agrees in person with the subject nearest to it.

7. Voice is generally given as a property of transitive verbs and shows whether the subject acts or is the receiver of the action. Intransitive verbs that denote action, have the active voice; but, from their nature, they can not ordinarily be used in the passive voice, to represent the subject as the agent.

8. *a.* Washington *threw* up an embankment and attacked the enemy. *b.* The sentence is ambiguous. It may be changed to "I like him best of all"; or, "I like him better than I like any other person."

9. (1) This is a complex declarative sentence.

(2) Principal clause, "The scouts report to Cæsar."

(3) Subordinate clause, "That the camp of the enemy is five miles distant."

(4) Of principal clause, *scouts* is subject nominative, modified by article *the*.

(5) The predicate verb is *report*, modified by the phrase *to Cæsar*, and by the subordinate clause as direct object.

(6) Of subordinate clause, *camp* is subject nominative, modified by *the* and *of the enemy*.

(7) Predicate verb *is* is combined with the predicate adjective *distant*.

(8) The predicate *is distant* is modified by the objective adverbial phrase *five miles*.

(9) *That* is the subordinate connective.

10. *a.* *Enemy* is a collective noun, neuter, singular. and object of the preposition *of*. *b.* *Miles* is a noun, common, neuter, plural, objective adverbial, denoting distance.

GEOGRAPHY.—1. Oregon is bounded on the north by Washington Territory; east, by Idaho; south, by Nevada and California; west, by the Pacific Ocean. Salem, the capital, is situated in the northwestern part of the state, on the Willamette River. Portland, the metropolis, is situated north of Salem, on the Willamette.

2. Owing to the inclination of the earth's axis, on the 21st day of June the arctic circle is wholly within the circle of the sun's illumination; hence the day lasts 24 hours. On the 22d of December, the arctic circle is wholly within shadow; hence it has a night of 24 hrs.

During the year, therefore, the relative length of day and night will vary from zero to 24 hours.

3. Because, at high altitudes, the temperature is so low that the vapor of the atmosphere is condensed into snow; this snow becomes a permanent covering, since the heat of summer is not sufficient to melt it.

4. Rio Janeiro, Bahia, Para, Pernambuco.

5. Boston, New York, Brooklyn, Charleston, Savannah.

6. Mount Vesuvius is on the western coast of Italy, south of Naples; Mount St. Elias is situated at the southeastern point of Alaska; the Black Mountains are in the western part of North Carolina; the Matterhorn is one of the Swiss Alps; Cotopaxi is in the Andes of Ecuador.

7. Central America embraces the British colony of Balize, and five republics.

8. The proposed line extends from Lake Nicaragua to Brito on the Pacific. It traverses the lake to its outlet at Port San Carlos, follows the San Juan River for about 90 miles, and then uses a canal to the harbor of San Juan del Norte, the total distance being 194 miles.

9. 60,602,000, according to the latest estimate.

10. The general direction of the course of the Gulf Stream is to the northeast. It belongs to the class called Return Currents. At its origin, the Gulf Stream has the velocity of the earth's rotary motion at that point; as it advances to the north, however, the rotary motion diminishes, and the moving particles of water are in advance, or to the east of their former position.

DEPARTMENT OF QUERIES AND ANSWERS.

This Department is conducted by J. C. GREGG, Superintendent of the Brazil Schools.
Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

[36] When, and what was the first newspaper published?.

DE LA COFFEE, *Spencer, Ind.*

[37] Give an arithmetical solution of problem 90, page 406, Ray's New Higher Arithmetic.

RABENF.

[38] By whom, and to whom, was presented a sword with this inscription: "Ab duce maximo natu in Europa, ad maximum ducem in orbe terrarum?"

J. D. FRENCH, *Linn Grove, Ind.*

[39] What American was exchanged for the British General Burgoyne?

Id.

[40] The centers of 4 circles, each 10 rods in diameter, are at the corners of a square 10 rods each way; what is the diameter of the circle inscribed between them? W. E. STILWELL, *Fort Branch, Ind.*

[41] Why is it colder, in the absence of winds, in the valleys than on the elevations? CHAS. O. DU BOIS, *Nashville, Ind.*

[42] A publisher issued an edition of 5,000 copies of an 18mo. book of 216 pages; how much paper did he use, allowing one quire to each ream for waste?

ANSWERS.

[23] Draw a parallelogram representing the field. Cut off from one end two strips of 5 rods wide, and the remainder will be a square. Now place the two strips on two adjacent sides of the square and add a small square 5 rods each way at the corner, and we have a new square containing 6241 sq. rods. Extract square root and we have 79 rods. Then 79 rods plus 5 rods is the length, and 79 rods minus 5 rods is the width required. — —, *Waverly, Ind.*

[24] For solution see Schuyler's Complete Algebra, revised edition, page 109. RABENF.

[25] The term of office of President Polk expired on the 4th of March, 1849, which happened to be Sunday. President-elect Taylor refused to be inaugurated on Sunday, and did not take the oath until Monday, March the 5th. The Hon. David R. Atchison was President *pro tem.* of the Senate, and therefore *de facto* President of the United States for one day. J. E. WHITE, *Greenville, O.*

[26] Kansas City is on the right bank of the Missouri River.

JAMES F. HOOD, *Pt. Isabel, Ind.*

[27] November 30, 1799.

RABENF.

[28] No solution received.

[29] The sine is a mean proportional between the two segments of the diameter of which 2 feet is one segment. Let X = the other segment, then $2 : 20 :: 20 : X$ and

$$2X = 400$$

$$X = 200$$

$$X + 2 = 202 = \text{diameter.}$$

RABENF.

[30] $\$1000 + 06\frac{2}{3}\frac{2}{3} = \16650 , whole cost.

$\$500. + .10 = \5000 , face of state stock.

$\$500 + .04 = \12500 , face of railroad stock.

Cost of state stock = $\frac{2}{3}$ of railroad, share of same face, but there being $2\frac{1}{2}$ times as many railroad shares as of the other, therefore the cost = $2\frac{1}{2}$ times $\frac{2}{3}$ of the other, or $\frac{5}{3}$: the sum of the two investments = $\frac{7}{3}$ of the cost of the state stock.

$\$16650 \div \frac{7}{3} = \5400 , cost of state stock.

$\$16650 \div \frac{2}{3} = \11250 , cost of railroad stock.

J. E. WHITE, *Greenville, O.*

[31] Robert Fulton was buried in Trinity Church, Necropolis, New York. He died from exposure incurred while a vessel was under construction.

DE LA COFFEE, *Spencer, Ind.*

[32] 90% = first investment.

$$\frac{105\% - \$33}{1.02} + \$11 - 90\% = 0.$$

$$102\frac{1}{2}\% - \$32\frac{0}{7} + \$11 - 90\% = 0.$$

$$12\frac{1}{2}\% = \$21\frac{0}{7}.$$

$$1\% = \$\frac{3}{0}.$$

$$90\% = \$148.50, \text{ Ans.}$$

RABENF.

[33] Dakota Territory, Bismark; Louisiana, Baton Rouge; West Virginia, Charleston.

JAMES F. HOOD, *Pt. Isabel, Ind.*

[34] A simple declarative sentence. Apples is the subject, modified by the adjective element, the; hard to gather, is the predicate; are, is the copula.

W. T. LONGWITH, *Hector, Ind.*

[35] A note, of which the following is a copy:

"FT. MONTGOMERY, Oct. 8, 1777.

Nous y voici, (We come), and nothing now between us and Gates. I sincerely hope this little success of ours may facilitate your operations. In answer to your letter of Sept. 28, by C. C. (Capt. Campbell), I shall only say, I can not presume to order, or even advise, for reasons obvious. I heartily wish you success.

Faithfully yours,

H. CLINTON.

GENERAL BURGOWNE."

DE LA COFFEE.

Still we have no correct solution for No. 18. Will not some teacher send us one for next month? If none are received the editor will try his hand.

CREDITS.

De la Coffee, 26, 31, 33, 35; "Rabenf", 23, 24, 26, 27, 29, 30, 31, 32, 33; U. S. C., 26, 30, 32, 33, 33; J. E. White, 25 and 30; W. T. Longwith, 25, 26, 31, 34; Jas. F. Hood, 26, 31, 32, 33; J. D. French, 23, 26, 27, 33; J. H. Tomlin, Clinton, Ind., 16.

The solution to No. 23 is very elegant, and the solver should have given his name. We hope he will contribute frequently.

Answers ought to be in by the 14th. Our time for preparation this month was very short.

Can we not have a solution to No. 28?

PERU has issued its "course of study," with statistics, rules, etc., for 1887, in handsome form. It shows the schools well in hand and on the up grade. Geo. G. Manning is still at the helm.

MISCELLANY.

PARKE COUNTY has published its Outlines of Institute Work in neat form.

F. C. OSBORN is now the agent of Ginn & Co. for Indiana and Michigan. His address is 180 Wabash Ave., Chicago.

FRANKLIN COUNTY.—Supt. Crecraft sends out a well arranged and well outlined "Outlines of Township Institute Work."

WINCHESTER sends out its manual for '87-'88, which shows well for the schools. Supt. C. H. Wood is holding things level.

SPICELAND ACADEMY is in a very prosperous condition. The high school department is 80% larger than last year. Thomas Newlin is principal.

UNION CHRISTIAN COLLEGE, located at Merom, Ind., is prospering under the direction of its new President, L. J. Aldrich. It is worthy a liberal patronage.

WESTERN NORMAL COLLEGE, at Shenandoah, Iowa, under the control of W. M. Croan, formerly of this state, seems to march right on in the highway to prosperity.

THE STEUBEN COUNTY Institute will open Nov. 7. Supt. Carlin has provided a rich feast for the teachers of his county. A strong corps of instructors will be reinforced by a lecture every one of the five nights of the institute.

THE Superintendents and Teachers of Northern Indiana will hold their next meeting at Michigan City, November 4 and 5. An attractive program has been arranged, including an address by Geo. Howland, Supt. of the Chicago schools

DE KALB COUNTY.—Supt. C. M. Merica is bound to be in time. He has decided to hold his institute next year beginning August 27. He has engaged W. W. Parsons of the State Normal, and is in search of another "first-class worker."

THE STATE NORMAL SCHOOL has about fifty more students in attendance at present than ever before at a fall term. This school was never in better condition than at present, and never did work that was more highly appreciated by the best educators of the state.

PARKE COUNTY was the first in the state to hold its annual association on the Friday and Saturday after Thanksgiving,—now this is the popular time and many other counties have adopted it. This year Parke makes a new departure,—it has a lecture on Friday evening by Dr. Willetts, of Louisville, and the annual address on Saturday, by Col. Parker.

GEMS OF THOUGHT.

T O - D A Y .

"Every day is a fresh beginning,
Every morn is the world made new."

"All the past deeds are past and over,
The tasks are done and the tears are shed.
Yesterday's errors let yesterday cover;
Yesterday's wounds which smarted and bled,
Are healed with the healing which night has shed.

Yesterday now is a part of forever,
Bound up in a sheaf which God holds tight,
With glad days and sad days and bad days which never
Shall visit us more with their bloom and their blight,
Their fullness of sunshine or sorrowful night.

Let them go, since we can not relieve them,
Can not undo, and can not atone,
God in his mercy receive them, forgive them!
Only the new days are our own;
To-day is ours and to-day alone."

—Susan Coolidge.

COUNTY INSTITUTES.

RUSH COUNTY.—Enrollment 150; average attendance 82. Instructors, Geo. F. Bass, J. K. Beck. State Supt La Follette was present one day and evening and rendered valuable aid. "One of the best institutes ever held in the county." Will. S. Meredith is Supt.

THE STARKE COUNTY Teachers' Institute was held from Sept. 12 to 16, and was perhaps the best ever held in the county. The teachers were all present but two, and the best of interest was maintained throughout. A Reading Circle was organized, enrolling five-sixths of the teachers. Four-fifths of the teachers subscribed for the School Journal. Instruction was given by Messrs. Kenaston, Kircher, Reddick, Porter, Brown, and Bellman, besides some home talent. Our teachers are fast improving their grades, and are willing to do much more, as was evinced by a liberal purchase of professional books of an average of \$4.00 per teacher. Most of our present teachers are students from our best normal schools, and although we have but sixty schools in our county we propose in two or three years more of faithful work to develop a system of gradation and thoroughness of work that will make many larger and more assuming counties ashamed of themselves.

W. B. SINCLAIR, Supt.

HIGH SCHOOL SECTION.

The executive committee of the High School Section of the State Teachers' Association will, in pursuance of a resolution adopted at the last meeting of the association, select the best two papers submitted by high school teachers on any subject concerning high school work, the successful papers to be read before the Section Tuesday, December 27, 1887.

In order that the judges appointed by the committee may have time for their decision, papers must be submitted by not later than Nov. 30, to either of the undersigned. Those contemplating the preparation of competitive papers will please to inform the committee at the earliest possible date.

All high school teachers are earnestly urged to be present and aid in making this department of the association a success.

E. E. GRIFFITH, Frankfort, Ind.
H. G. WOODY, Kokomo, Ind. } *Committee.*

READING CIRCLE NOTES.

Encouraging reports of membership to the Reading Circle continue to come in. Among those coming to the front since the last issue of the Journal are the following:

Cass..... 50	Dearborn.... 80	Decatur..... 75
De Kalb..... 65	Delaware.... 130	Dubois..... 80
Fayette..... 30	Floyd..... 40	Fulton..... 50
Gibson..... 80	Grant..... 86	Hamilton.... 165
Hancock 100	Harrison.... 80	Henry 75
Howard 100	Huntington.. 110	Jefferson 40
Johnson.... 75	Kosciusko... 80	La Grange.... 100
Marion..... 130	Marshall.... 75	Monroe 105
Morgan 134	Newton..... 100	Ohio..... 25
Owen 40	Perry..... 80	Pike..... 75
Posey..... 90	Pulaski 75	Putnam 125
Randolph.... 130	Rush..... 50	Scott 40
Spencer 60	Starke..... 50	Steuben..... 75
Tippecanoe .. 75	Tipton..... 50	Union..... 51
Vanderburgh. 40	Warren..... 65	Warrick..... 70
Washington.. 60	Wells 100	White 100

Greene—every teacher, "*not one left out.*"

THE membership for the year is not much short of 6,000.

SOME of the counties have not held the County Institute, at which time the organization is completed.

THE delay of the Outlines was occasioned by the demand for a second edition. All orders at this date have been filled.

BLANKS were sent out by Secretary Geeting, October 15, for the enrollment of the membership by counties, and these are intended for binding, making a permanent record.

METHODS OF CONDUCTING READING CIRCLE WORK.

Posey Township, Rush county, with 11 teachers, enrolls 18 members of the Reading Circle. A goodly number of us do the *reading* together. Think we derive more benefit thereby.

Yours,

E. B. COLLINS, *Tp. Manager*.

Franklin County.—At the last County Institute it was resolved that half of the time at the Township Institute be devoted to Reading Circle course outlined for the year. The plan of work is as follows:

All teachers prepare as for a recitation.

One is appointed each month to conduct the recitation (teachers reciting as in a class).

Subjects are assigned for essays in connection with the class-work.

Questions are prepared by the County Supt. on each month's work and sent to the teachers, and these are answered and the MSS. sent to the Supt. for examination and grading.

The feature of furnishing questions tends to keep up interest, establish uniformity, prevent falling back in the work, and affords all the tests of an examination without some of its uncomfortable qualities.

A. N. CRECRAFT, *Co. Supt.*

Randolph County.—The plan pursued in this county in organizing the work has been essentially the same as that recommended by the State Superintendent in his circular to County Superintendents, dated August 1, 1887.

We ordered and had on hand the first day of the County Institute, fifty sets of Reading Circle books. Arrangements had been made previously with the different township trustees to pay for the books of those teachers who were not prepared to pay for them at the time, with the understanding that the amount was to be deducted from their wages at a subsequent settlement.

Early in the week the matter was fully presented before the institute, and a committee of one from each township was appointed to prepare resolutions and talk up the work. After the committee made its report, which was on the succeeding day of appointment, a township manager for each township was appointed, and the books then on hand were readily disposed of to the teachers.

As the publishers could not furnish us any more books during the week of the county institute, I personally visited the several townships and in conjunction with the township manager, organized one or more circles as was deemed expedient. Blank reports have been prepared and furnished to the secretaries of local circles and township managers.

the former of which are to be filled out and sent to the township manager, and the latter to be filled out and sent to the county manager, thus unifying the work of the county.

If a township has two or more circles, the township manager is directed to call them together in joint sessions as often as is thought necessary.

In addition to this, we have our county divided into three districts or divisions (four townships in each division), for the purpose of institute work; and the afternoon sessions of these institutes is devoted to a review and discussion of the Reading Circle work.

We have in this county one hundred and forty district schools, and of the one hundred and forty teachers one hundred have been already enrolled as members of the Reading Circle, and at least twenty-five or thirty of the remainder will take the work as soon as books can be procured. The only drawback we have experienced in this county, has been the delay in the shipment of books.

Yours for the success of the Reading Circle,

J. W. DENNEY.

PERSONAL.

A. H. Miller is principal of the Orland schools.

W. H. Brown is principal of the schools at Mexico.

E. W. Bohannon is principal of the Brownsburg schools.

E. O. Arbuckle, late Supt. of Jefferson county, is now principal of the schools at McCordsville.

W. E. Hackenlively, formerly of Indiana, is now teaching at Rawlins, Wyoming Ter., at a salary of \$900.

M. J. Mallery, Supt. of the Danville schools, according to reports has developed into a good institute worker.

Calvin E. Pontius, of Fulton county, has accepted a position as instructor in the Boys' Reform School at Plainfield.

J. Goodykoontz, formerly of Indiana, has been re-appointed to the chair of Pedagogy in the Normal School at Jacksonville, Ala., at an increased salary.

Miss Margaret Cox, for many years an assistant in the State Normal training school, has been promoted to the principalship, and is giving good satisfaction.

G. P. Glenn, formerly of Kendallville, but lately Supt. of schools at Muskegon, Mich., has accepted the superintendency of the Jacksonville, Florida, schools.

W. J. Martin, teacher of mathematics in Vincennes University, recently died of typhoid fever. He was a most estimable young man, and his death is sincerely regretted.

G. M. Naber is serving his third year at South Whitley. This place recently dedicated a new 10-room school house, the largest ever built by a township trustee. Good for South Whitley.

Miss Harriet N. Morris, a relative of Robert Morris, of Revolutionary fame, is the only lady principal of a grammar school building in Baltimore, and she is one of the most efficient principals in the city.

J. P. Funk, who has been at the head of the Corydon schools for the last twelve or thirteen years, has accepted the principalship of the New Albany high school, to fill the vacancy occasioned by the resignation of R. A. Ogg.

Hon. John W. Holcombe, ex-State Supt., now of Washington City, was married to Miss Effie B. McOuat, one of the most charming young ladies of Indianapolis, November 2d. The Journal extends most cordial congratulations.

Prof. L. S. Thompson, of Purdue University, has been persuaded to decline the position of superintendent of writing in the Cincinnati schools, to which he was elected, and so will remain at his old post where he is doing such efficient work.

Mrs. Lizzie S. Byers, who has been for many years a teacher in the Terre Haute high school, has been elected a member of the Normal School faculty, at an increased salary. This is a deserved promotion. Mrs. Byers is one of the most capable women in the state.

R. A. Ogg, for many years past principal of the New Albany high school, has been elected Supt. of the Greencastle schools. This is a fitting promotion. The Greencastle board could not have easily found a more worthy or more efficient man to take charge of their schools.

Wm. E. White, son of Hon. E. E. White, was recently married to Miss Jessie F. Thompson, daughter of Prof. L. S. Thompson, of Purdue University. The bride and groom are both graduates of the class of '81, Purdue University. Their new home will be Winfield, Kan.

R. G. Boone, of the State University, so well and so favorably known throughout the state, as heretofore stated will spend the ensuing year at Johns Hopkins University. His wife accompanies him and will pursue some studies. His address is 1416 Linden Avenue, Baltimore, Md.

Thos. P. Ballard, of Columbus, O., agent for Ginn & Co., owing to the increase of business in other fields, has been compelled to give up Indiana. Mr. Ballard had made many friends in Indiana, and was appreciated on account of his lively interest in many of the live educational problems.

A mutual friend, who dropped in on Pres. H. B. Brown, of the Valparaiso Normal, reports him serenely happy. He is father of a town, of a school of 1700 pupils, and of a sweet little girl that he dances

around and calls "papa's bessid yittee tootsey-wootsey," as natural as if he had been an old convert.

State Supt. H. M. La Follette has already visited *forty-two* different institutes and will make it forty-five before the year closes. In addition to this he has attended meetings of teachers and citizens in various other counties. He is most of the time "on the wing," and he does effective work wherever he goes.

H. B. Hill, for many years the Supt. of Dearborn county, is being spoken of by some of his friends as a candidate for Superintendent of Public Instruction on the Democratic ticket in the next campaign. Mr. Hill made one of the best county superintendents in the state, and the Democrats will have some trouble to find a better man for this responsible office.

Eli F. Brown has given up the agency for the People's Encyclopedia, and has again connected himself with the Indianapolis Business University, the institution with which he was associated for a short time before he went to Paducah, Ky. Mr. Brown is an instructor of superior merit, and will make the English Department of the Business University first-class.

G. W. A. Luckey, who was for several years Supt. of Adams county, and later Supt. of the Decatur schools, gave up his place at the close of last year with the intention of completing a college education. Owing to his failing health he was compelled to change his plans, and so went to California, where he secured the principalship of the Beaumont schools, where he gets as much money as he received at Decatur, with the delightful climate in addition. His wife, who is also a superior teacher, is teaching with him, and both are regaining health rapidly.

Prof. W. H. Payne, of Michigan University, one of the leading educational thinkers of this country, has accepted the Presidency of the State Normal College of Tennessee, at Nashville. His salary is \$3500 and the use of "the President's house." This is one of the best endowed normal schools in the country. It receives \$2,800 from the State University, \$10,000 from the State of Tennessee, and \$37,500 from the Peabody fund. Of this \$37,500, \$9,000 is applied on salaries and \$22,800 for scholarships of \$200 each, good two years, awarded on competitive examinations. This is the great normal school of the South. Prof. Payne will fill his new position with ability.

BOOK TABLE.

FLORIDA SCHOOL JOURNAL, Vol. I, No. 1. H. Merz, editor, Lake City, Fla. This is a 20-page 2-column monthly. It is unique in that it does not "come to stay" or to "fill a long felt want." It deserves success.

vanced classes. At the same time each volume may be used independently and is sold separately. In the first book the discoveries and explorations made by different explorers is detailed in a most interesting manner; No. 2 carries the narrative down to the time when the relations between the Americans and the mother country were becoming strained; No. 3 outlines the process by which the colonies were developed into a nation. The name of Arthur Gilman will be a recommendation to those who are acquainted with his other efforts in making his story attractive to children.

LIGHTS OF TWO CENTURIES: *Edited by Edward Everett Hale. New York and Chicago: A. S. Barnes & Co. Cyrus Smith, Indianapolis, Agent for Indiana.*

In the belief that the study of the lives and works of master-minds in every department of the world's progress is of educational value, this book has been written. It is prepared especially for those who are engaged in the great work of education. Fifty lives are here made prominent. Some of them were lived two hundred years ago, but they still shed a radiance abroad, serving as light-houses for the present as well as future generations. These fifty lives are representative of the work accomplished in art, in science, in literature, in invention. They do not include all that have become prominent in these special fields, but they are master-spirits that posterity delights to honor. As a work of reference, this book possesses great value for the general student: as a study, it must create a desire to know more; as a work for general reading, it is attractive and interesting. It has been adopted by the Reading Circle of Indiana as one of the text-books to be used the coming year.

BRIEF INSTITUTES OF GENERAL HISTORY: *By E. Benjamin Andrews. D. D., LL. D., Professor of History in Brown University. Boston: Silver, Rogers & Co. O. S. Cook, Chicago, Western Agent.*

A general history, of 452 pp., must necessarily touch briefly upon its different topics. This book is therefore well named "Brief Institutes of History." But while brief its contents need not be disconnected or aimless. On the contrary, the method throughout is articulate and progressive. All unimportant details are ignored, the most important treated in notes and the rationale of historical movement made prominent throughout. As a basis for topical study, the book seems best adapted. At the head of every chapter and nearly every paragraph are named a number of histories which can be consulted to advantage. Thus to the earnest student the beginning is designated and the way marked out through the broad fields of history, and with a living teacher to guide him, he can not fail to reap rich rewards from his work.

This volume is handsomely printed on the best quality of paper and bound in cloth. It will prove a welcome book to all students and readers of history.

MCGUFFEY'S ALTERNATE READERS: *Cincinnati: Van Antwerp, Bragg & Co.*

The first four of this set of Readers are already out, and a Fifth and Sixth are in preparation. There is a growing sentiment on the part of most thinking teachers that one series of Readers does not furnish

sufficient reading matter to give the best results. When a child has read one First Reader through, the best thing for him to do next is not to take a Second Reader, but to take another First Reader and read that through. What the child chiefly needs is *practice* in gaining simple thoughts from the printed page and easily expressing them. At least double the amount of reading matter contained in one series of Readers is required for this practice. The above named series have been prepared with special reference to supplying this demand. The books have been made in the light of all the other books as guides, and are the result of the best judgment, the best suggestion, and the best work of a large number of the best educators and practical teachers of the country. After this statement it is hardly necessary to add that the books are fully abreast the demands of the times. The matter is admirably adapted to the various grades, and the grading seems beyond criticism. The mechanical execution of the books is in the excellent style of this well known house.

BUSINESS NOTICES.

DON'T FAIL to read the advertisement concerning "Select Stories for Opening Exercises in Schools," on another page.

SCHOOL BOARDS contemplating changes, can learn the address of the best Western and Eastern teachers, willing to make a change, from the Teachers' Co-operative Association, 170 State St., Chicago, Orville Brewer, Manager. We can assure all who write them of confidential and honorable treatment.

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11-2t Address, J. B. EVANS, New Ross, Ind.

TO PRIMARY TEACHERS.—How to keep little children profitably employed at their seats, is the great problem of primary teachers. While children are learning to write, one of the best methods, if not the best, is to give to each child a box of letters printed on card-board. Before the child can write it can employ its time in forming words and sentences from these letters. In this way it can be taught its letters, spelling, reading, the use of capitals, the use of punctuation points, etc. These letters cost but a trifle. For samples and for price, address Sentinel Printing Co., Indianapolis. 11-2

CONSUMPTION CURED.—An old physician retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all throat and lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 149 Power's Block, Rochester, N. Y. 11-2t

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11-11

HOUGHTON, MIFFLIN & CO., 4 Park St., Boston.

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8-11

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INDIANA
SCHOOL JOURNAL

Vol. XXXII.

DECEMBER, 1887.

No. 12.

*SOME OBSERVATIONS ON THE TEACHING OF
LATIN IN THE HIGH SCHOOL.*

BY GEO. W. HUFFORD.

WHENEVER in the history of educational science, the value of any subject taught has been seriously called in question, careful examination has usually revealed the fact that the methods of teaching have been chiefly responsible; that instead of being life-giving, mechanical formalism has rendered the subject itself practically fruitless. To this cause may be attributed the recent vigorous opposition to the study of the classics. In the reaction against the exclusiveness of the old curricula, in which nothing was deemed worthy of a place but Latin, Greek, and Mathematics, the assailants, not content with securing an entrance for other subjects through the breach which they had made in the walls of established custom, have attempted entirely to drive out the former possessors of the fortress. Hence, in some high schools, the study of the classics has been eliminated from the course. The reaction may be considered to have reached its extreme limit in the cry, "A Modern Fetich," and now we may hope to see sober sense and calm reason applied to the readjustment of the different classes of subjects proper to a high school course on a rational basis of utility.

One may now even venture to *assume* that Latin has a place in the high school, and on that assumption may offer some ob-

servations on methods of teaching this language. The agitation of the question has resulted in accomplishing two important reforms: 1. In the character of the text-books used; 2. In the methods of teaching. The two changes are so inter-related that it is difficult to determine which is the cause and which the effect; but both are undoubtedly due to the searching examination of the whole matter which has been forced upon the advocates of classical study by the attacks of its opponents.

Those of us who studied Latin on the old plan have dreary recollections of the time spent in the old Latin Grammar, in memorizing declensions and conjugations, rules in coarse print, remarks and exceptions in fine print, until at length, with a whole magazine of etymological and syntactical weapons in our brain, we were led on to battle with the difficulties of the Latin sentence. After months of study, we began to see these isolated forms in their relations to one another. The old way of memorizing words mechanically has yielded to the more rational method by which the pupils learn from the very beginning to read and to write the words in sentences. Thus they are led to see at once the connection between the forms of words and their uses. I would not seem to undervalue the importance of a thorough mastery of forms, as this knowledge is absolutely essential in translating either from Latin into English or from English into Latin. By this method, the science of the Latin accidence is daily reduced to a practical art, while at the same time the pupil's knowledge of English is tested and promoted.

While I firmly believe that it is only quackery in teaching that would try to make students think that a language can be learned in six weeks, or six months, I see no advantage in multiplying difficulties. Even with the most wisely-planned text-books, and the most skillful teaching, the grammatical construction of any language presents difficulties, the mastery of which will give abundant opportunity for that mind-training which comes through the successful grappling with difficult problems. I am also convinced that there is no more common mistake in teaching any subject than the failure to discriminate between the more and the less important, and that much of the fruitlessness and of the

waste of time, of which we have heard so much criticism, is due to the failure thus to discriminate, and to a false conception of thoroughness. It is possible to go too far in the effort to allure the pupil by attractive text-books. Yet a rational adaptation of some of the plainest principles in mental science will enable the teacher of Latin to lead his pupils so to study the language that it will be a source of real pleasure as well as of mental profit. The memorizing of forms may be greatly facilitated by calling into requisition the law of association. Beginners are likely to overlook the fact that the declensions, as well as the conjugations, have many things in common as well as points of difference. Their attention must continually be directed to these important features. The Latin student's success or failure depends largely on the nature of the work done in the first year. Thorough grounding in the grammatical principles underlying the structure of the language is essential. In this case the quality rather than the quantity of the work should be chiefly considered; for by this means only can ease in translation be secured.

As I have already said, the teacher should carefully discriminate between the relatively important and unimportant. In giving declensions, to require the naming of cases, and in conjugations, the naming of the persons, after a pupil has once thoroughly learned them, is, in my opinion, spending valuable time in "vain repetition." Also, in questioning upon syntactical construction, much time is often unwisely spent in the full repetition of every rule of syntax. As each case of construction is taken up, the pupils should be required to memorize the rule accurately; but in giving the grammatical construction of any word, it is only necessary to state specifically its use in that place. For example, the rule is learned, "Cause, manner, and means are denoted by the ablative." If I ask John to give the construction of *vallo* in the sentence, "Rex urbem vallo munivit," "The king fortified the city with a rampart," it is all-sufficient for him to say *vallo* is an "ablative of *means*," without repeating the rule. In fact the repetition of the rule without specifying the exact use of *vallo* in this sentence is too general, as it does not indicate on John's part a knowledge of *which* one of the uses of the ablative is exemplified in the word *vallo*.

This is the kind of answer which should be required, not merely because of the saving of time, but because in this way the ability to discriminate is cultivated. In my opinion it is useless to spend so much time in formal parsing. In the sentence just given, to say that *rex* is a noun of the third declension, from *rex, regis*, masculine, singular, nominative, and the subject of *munivit*, according to rule, etc., is profitable for awhile, but continued for months and months, it becomes wearisome to teachers and a profitless drudgery to pupils. The same is true in English Grammar, when a pupil is subjected daily to such parrot-like repetition as, "man is a noun because it is a name, common because it is a general name, third person because spoken of, masculine gender because it denotes a male, singular number because it denotes one, and in the nominative case because it is the subject of a finite verb," etc. How much has been added to the pupil's stock of knowledge by continually repeating this string of words? By a few pointed questions on the part of the teacher, several sentences might have been examined critically as to the relations of words and as to the thought expressed. Again, by a continual repetition of forms, in parsing, there is danger of the pupil's losing sight of the real object to be gained.

While such exercises as those just named may fitly be classed as "*vain repetitions*," there is a kind of necessary drill which can be secured only through frequent repetition of *peculiar* forms, as in the parts of irregular verbs, and by repeated questionings upon difficult points in construction. I do not intend to imply that I would not have any parsing of Latin words; early in the study this is important; but as the pupil progresses, greater stress should be laid upon the ability to discover readily the relation of words by the principles of agreement and dependence already learned: for it is from this ability rather than from the continual repetition of parsing exercises that ease in translation is to be acquired. In all of the better text-books now in use for the first year's study in Latin, the exercises are largely drawn from Caesar's Commentaries: so that one who has been thoroughly drilled in this work should find himself well equipped for grappling with Caesar's classicisms. In spite of all that may be said to the con-

trary, there is much in having a good text-book on any subject. The very appearance of a book made attractive by clear, pleasing illustrations often excites a kind of inspiration to the study, and certainly arouses a desire to know something of that which is so attractively presented. Especially is this true in the case of some of the Cæsars that have recently been published. In the former times to which we have referred, the "Commentaries" were treated as if translation and parsing were the sole object of the study. The usual routine was sometimes varied by placing upon the black-board the grammatical analysis of a sentence; arranging the words in beautiful ellipses, or as Colonel Parker graphically describes the process, "stringing the mutilated remains on cruel diagrams"; but never was a word said concerning the historical interest of the period of which these Commentaries treated. Within the past year, three new editions of Cæsar have been published by as many different editors, but all containing some new and valuable features. The colored plates illustrating the manner of attacking a besieged city, the various classes of Roman soldiery with all their equipments, and the peculiar modes of warfare, give reality and vividness to the narration.

The pupils feel that this is not written, as so many seem to have believed, merely for the purpose of furnishing teachers with material for assigning severe tasks in dry construing and parsing, but that it is a veritable history of the exploits of a great general in the conduct of remarkable campaigns. Again, bound in with the text, not relegated to the distant notes, these books contain clear diagrams of the battles described, based upon the latest researches of modern scholarship, by which the pupil, as he reads Cæsar's narrative may trace the movements of the armies. The interest is also promoted by having the diagrams of important battles drawn upon the black-board with colored crayons.

The study of Cæsar properly pursued involves much more than a rendering of the Latin into English. It is not merely philological, but embraces geographical, historical and biographical researches. Does some one object, on the ground that this increases the difficulty of the study? Whatever redeems a sub-

ject from barren abstraction and gives to it reality and interest, is of the greatest value. In reading Cæsar's Commentaries, it should not be forgotten that it is a literary masterpiece, to be studied in such a manner as to comprehend it in its setting of place, time, and circumstance. All will agree that to read any great author understandingly, one must acquaint himself with the historical facts or mythological stories to which allusion is made. The teacher of Cæsar who recognizes the educational value of intelligent interpretation will lead his pupils to inform themselves concerning the history to which reference is made in the text. Such an interest may be excited that the pupils will desire to review the entire career of him whom Shakespeare calls, "The foremost man of all the world."

It is hardly necessary to add that what has been said of the teaching of Cæsar applies equally to the reading of Virgil, Cicero, or any other Latin author.

In thus advocating the plan of requiring exercises of this nature for the sake of enlivening and giving reality to the study, let me not seem to lay less stress upon the importance of the translation itself. Believing as I do that the study of the classics is of high educational value, and that much of its strength as a disciplinary agent lies in the training of the mental powers through translating, I would, on the contrary, emphasize its importance. The exercise of translation from Latin into one's native tongue necessitates a discrimination between words of similar meaning and demands judgment in so arranging the words as accurately to express the thought. It is truly said that "the structure of every sentence is a lesson in logic." It is a problem demanding reflection and the closest reasoning in its solution. From the translations one sometimes hears offered by pupils and accepted by teachers, one is led to conclude that both pupils and teacher have failed to remember that a sentence is the expression of a thought. To discover the thought of the author, then, should be the first aim in translation. After that is clearly comprehended the next object should be to express the same thought in the best English at command. To insist upon what is called a literal translation often takes the life out of a passage. It also

cultivates pernicious habits, because in that case translating becomes a mere mechanical form, and fails to bring into exercise the power of analytical discrimination. Moreover, it is often meaningless in English, and hence is in reality no translation at all. In the expression of thought, every language has its own peculiar forms or idioms, and hence the only real translation is in transmuting the idiom of one language into its corresponding form in another tongue.

The habit of uniformly translating the imperfect indicative by the English progressive, is a case in point. To render "*Consul amicos multos habebat*," "*The consul was having many friends*," is to fail to discriminate between the different uses of the English past tense. The wisdom of giving translations of the subjunctive mode when the conjugations are studied has been called in question by Latin scholars, as may be seen by examining a late First Latin Book, by practical teachers. The paradigms generally translate the pluperfect subjunctive by *might have* or *should have*, when the fact is that this would, quite as often give a wrong idea as a correct one, especially when it represents a future perfect of direct discourse, or is used in a conditional sentence to imply that the statement is contrary to fact. If in the passage, "*The ambassadors were anxious that those things which they might say should not be revealed*," etc., the pluperfect *dixissent* were translated by *might have said* or *should have said*, the thought would not be expressed at all. Other examples of the subjunctive occur in almost every chapter, but this one may serve to illustrate the point, that it is pernicious in its results to permit pupils to learn a certain translation of these forms in the paradigms and to use it everywhere without discrimination.

In the case of difficult passages, various expedients may be devised for leading the pupils to discover the best form of expression for the thought. It is often advantageous to divide a long sentence into shorter ones, without regard to connections, that the thought may be clearly comprehended, after which these short sentences may be recombined. One of these passages from the first book of the Gallic War may serve as an illustration. The literal translation which the pupil is likely to make is about

as follows: "If the adverse battle and the flight of the Gauls disturbed any, these, if they should inquire, to be able to find out, the Gauls having been worn out by the long continuance of the war, Ariovistus, since he might have kept himself many months in camp and in the marshes, and might not have made an opportunity of himself, having suddenly attacked the Gauls already despairing concerning a battle and being scattered, to have conquered more by cunning and stratagem than by valor." By a few pointed questions, the absurdity of the translation may be seen, and the thought brought out by the following statements: that the Gauls were worn out by the long continuance of the war, that Ariovistus had remained many months in camp and in the marshy places, that he had not given the Gauls an opportunity of fighting him, that they had despaired of a battle and were scattered, that Ariovistus had suddenly attacked them, and had gained a victory over them more by his cunning and strategy than by valor.

This should be rearranged in harmony with the Latin text, written upon the black-board by one or more pupils and subjected to the criticism of the class. There are some chapters in the first book of Cæsar that should receive especial attention because they are difficult to translate and because they so fully illustrate the difficulties of indirect discourse. They furnish admirable lessons for exercises in Latin composition. In them a great many uses of the subjunctive mood are clearly exemplified. They contain many allusions to important historical facts, and in themselves are among the finest specimens of Latin prose.

Here, rather than in a special text-book, is, in my opinion, the best place to study Latin composition. Sentences may be built up and amplified in Latin, just as they are in English, from the simple statement, consisting of subject and predicate. For example, a little time may be taken often by an oral exercise, such as, "The soldiers fight," "The soldiers use their swords," "The soldiers made an attack upon the enemy with drawn swords," etc., until an entire passage may be readily expressed by the pupils. That the study of the short disconnected sentences in the Latin Composition does not enable the pupils to

write connected discourse, will appear, if you ask them to learn two or three rules of syntax in the Grammar, and to bring in illustrations of these rules from the chapters which they have read in Cæsar. I venture the assertion, if they have had no previous training in Latin discourse, even though they may be well posted on the same work in the Latin composition, a large number of their examples will be incorrect. Along with the work of the composition book, they must have frequent exercises in writing connected discourse. They may be called upon to write upon the black-board the translation of some short passage which they have studied. Then let them try to turn the same into Latin again. The short passage of Latin may be dictated to them at their seats, for translation into English, and again into Latin.

The requirements for admission to college are now based largely upon the student's ability to read at sight an ordinary passage of Latin. This is evidently a step in the right direction. The question is no longer, "What do I know about a certain book?" but "Can I translate reasonably well ordinary Latin in any book?" To this end, exercises in reading at sight easy Latin stories should form a part of the Latin course in the high school. One recitation a week devoted to this work will surely yield large returns for the time spent.

To some it may seem that these observations upon the teaching of Latin have been limited to too narrow a scope. My reasons for so narrowing the theme are two-fold: First, that high school work in Latin is chiefly limited to these two years of study; and second, that thorough drill within these limits will enable students, who desire to pursue the languages farther in high school or beyond its walls, to do so with comparative ease. The actual disciplinary value of the study is chiefly secured in the first two years; to that extent it serves for "ability"; whatever additional time is given to its further pursuit, must "serve for delight and ornament."

The "Secret of the Teacher's Power" would make an admirable subject for an Association lecture; but better than all, it is a general topic for individual meditation and examination.

DOLLARS AND CENTS.

BY FLORENCE CARPENTER MARKLEY.

A PROMINENT educator of the country says that the reasons boys leave school earlier than girls are, the many humiliations to which they are subjected in the discipline of the school, causing them to revolt from authority, and the innate sense of freedom with the love of liberty which leads them to leave the confines of the school routine, to seek broader fields of free work and independence.

The Pilgrims deserved encomiums for their determination to leave the humiliating persecutions which they were compelled to undergo in their own land and seek a home in the "Boundless West," where the regime was not so rigid, and where the pure air of heaven rustled the majestic monarchs of the forest or tossed the flaxen curls of the little prattlers with the same playful freedom; but the *women* and *girls* were included in the refugees.

They, too, claimed as their inalienable right the refulgence cast, flower-like, over the vast domain of liberty by the mighty monarch of the day.

They chose a land whose abundance of material and infinite resources of wealth and power could have given them a real Utopian dream. How did they use their freedom? By enacting laws even more rigid than the ones from which they fled.

Are the requirements of school law and discipline any more binding upon the male students than upon the female? Do not the *boys* need the careful training and firm, yet lawful discipline of the well ordered school to fit them for good citizenship as well as the *girls*? The latter feel the promptings of the divine right of freedom just as forcibly, and their individuality is destroyed in the same degree as the former.

The individuality of the child must be guarded, developed, and strengthened; yet this characteristic, which is the distinguishing trait among the nations, should not be fostered, pampered, and so tenderly dealt with as to make a lawless citizen of our subject.

The child only learns right from wrong in the affairs of state by mingling with his fellow-beings under the guidance of a skillful teacher. His nature must be so developed as to bring out his strong faculties and strengthen the weaker ones. . But at all times the thought should be before us as though in letters of living light, "The aim of our schools is to make good citizens of her pupils."

Having carefully examined fifteen cases which came under notice in eleven years of work, I found that thirteen of them left school because of dollars and cents. Of the number, eight were compelled to help in the support of the family, three, being orphans, must look to their own welfare, and two felt it time to begin the foundation of a business career for themselves.

The two who left because *they felt the tasks at school to be irksome and humiliating* did not enter business life. One, only escaped the confines and rigid discipline of a state prison on account of his age; and the other kept him company in a neighboring reform school.

Perhaps you say these are extreme cases; so they are, and, too, they more forcibly illustrate the point I wish to make.

It seems but an expression of bitter sarcasm to voice such sentiments as humiliation and love of freedom as reasons for leaving the pleasant haven of such a grand public benefactor as the public schools.

Were such really the case, when these youths reached man's estate and entered the halls of justice, to there enact the laws of government, they would certainly revolutionize our present system of school work and school discipline. They would not leave to posterity what to them had been so humiliating and debasing.

This educator also claims that boys, having no *male* example in the teacher, either become effeminate, or filled with disgust leave the school.

The gentleman certainly forgets the time, which, thanks to a Beneficent Father is in the past, when man swayed the scepter of despotic power in the school-room, almost to the entire exclusion of women. The "Birchen terror which assisted the tardy loiterer along the thorny path of knowledge," was then as much

a part of the school room requisites as the spelling-book, that wondrous pride of "ye olden time."

I believe after mature deliberation the gentleman will retract the statement about the need of more male teachers.

What we do need is earnest deliberation and successfully combined efforts to make our work a profession, and not merely a stepping-stone to some other pursuit in life. Were this done, the boys would not "be repressed to keep them with the girls," but would be given all the work they were capable of performing. The true teacher does not repress the faculties either in boy or girl, but promotes as the need is seen.

I believe in every case of the really honest, upright boy, the cause for leaving school can be traced to dollars and cents.

He has loved ones depending upon his exertions; he is an orphan and must look to his own maintenance; or his great desire to become a man of business, are the motive powers which decide the question of his retirement.

As to the other class who leave from a "sense of humiliation" or "from disgust at his *female* teacher," I can only say that they usually augment the army of crime-stained culprits with which our land is cursed.

THE CULTURED SNOB.

BY W. H. VENABLE.

YOUNG Mr. Acme Sweetlight, having completed his college course and may be his European tour, has returned home, to rest and recuperate. Sweetlight is an illustrious example of what education and culture may accomplish for a man. He manifests his superiority in every way. His dress and demeanor proclaim him finished. Acme has absorbed the learning of his time. Any one may see at a glance that he is saturated with information and intellectual power.

True, he does not say much, or read much, or do much in any sort, to demonstrate his ability, but he looks very much indeed, and what he does utter is oracular and final. Acme is a contemplator of other men's defects, not a producer. He sits in

judgment on the words and works of lesser men. He sits apart in a region of inaccessible refinement, surveys, condemns, but never creates. Perpetual disapproval perches at the sensitive corners of Sweetlight's mouth. Censure and disparagement are written on his classic forehead. Infinite scorn of crudity and vulgarity lurks in the exquisite curl of his nose. He takes it for granted that everybody who tries to do anything is, according to the eternal fitness of things, a special target for his cynical arrows.

There is that in Acme Sweetlight which may be likened to what physicians call potential energy; he seems charged with some mighty force, which, however, has not yet vented itself in positive work. The man is like a bent bow or loaded gun, or ever so much superheated steam, confined in a strong boiler. The piston of actual achievement moves not, though certain spirits of hissing criticism do escape now and then through the safety-valve of speech. He smiles disdainfully at false syntax or bad rhetoric, though he will not write himself. He goes to the lecture and pronounces it a failure, and he attends church occasionally in a condescending mood, but is visibly bored by the sermon and excruciated by the singing. Doubtless this supreme being can do all things better than anything has ever been done. Conscious of latent ability, he cares not so far to identify himself with the "rascal multitude" as even to set an example.

DEPARTMENT OF PEDAGOGY.

[This Department is conducted by S. S. PARR, Principal De Pauw Normal School.]

A NEW DEPARTURE IN TEXT-BOOKS.

ONE of our enterprising publishing firms* has instituted a new departure in the making of physical geographies. It is one that promises great good, so far as text-books go. Instead of offering us a book made by a third-rate literary hack, as is done in the case of many school text-books, they have had a

* D. Appleton & Co.

book prepared by specialists who stand high in their respective subjects.

Not with any desire to advertise the enterprise of a publishing house, but to enforce the principle on which this piece of work is done, is this article written. The principle involved is a far reaching one, kindred in its nature with the very existence of teaching as a profession. A teacher is a specialist. The maker of any kind of book ought to be the same. If anybody whom the lottery of chance happens to draw out of the aggregate of humanity is fit to teach school, then a corollary is that anybody who can spell decently and not violate the proprieties of common speech is fit to compile a text-book. But nobody whose opinion is worth going across the street to secure believes either of these propositions.

The plain unvarnished truth is that until very recently our school text books have either been written, as said before, by literary hacks who rate about as high as penny-a-liners, on the cheap newspaper press, or by third-rate teachers who could make more money by turning off such literary ventures than they could by plying the trade of teaching. When we consider that sometimes teachers were made to slavishly follow texts of this kind, or else were so wanting in knowledge that they were compelled to follow them, the case, so far as the pupil's securing any real discipline is concerned, is bad enough. In any event the text-book ought to be the product of one who is thorough master of his subject, not only as to its objects and ideas, but as to its literature, history, and lines of progress. Besides all these qualifications, he should be a scientific teacher.

In the book which we are considering as an example of the properly constructed text-book, each division of the subject is written by a specialist in that department of science. The names of Dr. John S. Newberry, Professor of Geology and Palæontology, in Columbia College; Chas. H. Hitchcock, of Dartmouth; Henry Gannett, Chief Geographer of the U. S. Geological Survey; Dr. W. Le Conte Stevens, Prof. of Physics, Packer Collegiate Institute; Dr. N. L. Britton, Lecturer on Botany, Columbia College; Dr. C. Hart Merriam, Ornithologist of the Department of Agri-

culture; Professor Dall, of the Smithsonian Institute; and Mr. George F. Kuntz, one of the leading expert mineralogists of this country—such names are a guaranty of good expert work. Men of their class will not compile a book out of encyclopædia matter or gather it second-hand from the original work of other men. We may grant a mere compiler the choice of the best literature a subject affords, and the greatest effort he can turn off will reach no farther than to resemble a jackdaw's parading in the borrowed feathers of the bird-of-paradise, under the gaudy outside of which a little inspection reveals the commonplace and worthless coat of the false masquerader.

To make a good grammar the author must know the English language. An arithmetic worthy of the name can come from no one else than a mathematician. It is true that almost anybody can cull out a series of definitions and piece together what he might call examples and illustrations; but such a conglomerate is not a good text-book. Perhaps every county in the United States contains some teachers who would be able to patch a crazy quilt out of definitions in arithmetic and pad it out with illustrations and problems, but it would not be a living treatment of the subject when done. And yet have not many of the books we use been made in this way?

In the book in question, not only are the gentlemen who wrote its articles specialists, but most of them are experienced teachers. The latter condition is a *sine qua non*. A person who has not taught is incapacitated from writing for teachers and pupils. However well he knows his subject, he has no principles at hand to guide him in selecting, arranging, and presenting his matter. The laws that apply to these operations are gained from experience mainly.

There is but one important criticism on the book we have under consideration. The editor, Prof. Quackenbos, is neither a natural scientist nor a geographer. He is a teacher of English, and hence has worked in a field farthest removed from that of geography. How much would have been gained by the editorship of a man thoroughly versed in the subject of geography! He could have unified the work of the several contributors in a

way no merely literary editor could possibly do, and thus give a connection and articulation sometimes wanting among well-treated topics.

THE TEACHING OF GEOGRAPHY.*

UNDER title of the caption of this article, Professor Archibald Geikie, the well-known author of the *Primer of Physical Geography*, *Elementary Lessons in Physical Geography*, and several works on geology, gives the results of his experience in teaching and his thought about the subject of geography.

The purpose of this article is to extract from this valuable little work some of its most helpful suggestions.

One of the first topics is a definition of the subject of geography. In this definition, Prof. Geikie conforms to the definition first given by Ritter, and used in this country by Guyot: Geography deals with the earth as the dwelling place of man.

It seeks to present a distinct and luminous picture of man's surroundings—the earth he walks upon, the air he breathes, the waters that fertilize his fields, the oceans that bear him from continent to continent, the living things that minister to his existence and enjoyment alike on land and sea. Every department of nature has its own particular science, in which the minutest intricacies of structure and of process are patiently unraveled, and the facts are classified and arranged in their relations to each other and to the general system of the world. But geography does not attempt such detailed investigation. It accepts from these various sciences the facts which they determine and the conclusions which they establish, but selects those that bear most closely on the well-being of man.

Taught in the light of this liberal definition geography becomes a culture study, equal in value to any other subject. It ceases to be an infinite list of English, Irish, Dutch, German, Russian, Timbuctanese, Tartar, Jew, Christian, Pagan, and Infidel names, and takes on the backbone, respiratory apparatus, assimilative function and red blood of a healthy organism. The dead come to life again.

In the bounds of this conception, the teacher vitalizes the subject by touching it here and there with the interest which it derives from its connection with history. Every country, every

* *The Teaching of Geography*, pp. 202. 12mo, flexible cover. Published by Macmillan & Co., New York. Price to teachers, post-paid, 60 cents.

river, every town, every political boundary has its history. Using the home-state in illustration our word *Indiana* recalls the red tribes who roamed the deep forests of the Wabash and the Maumee. Fort Wayne reminds one of "Mad Anthony," Stony Point, and the Indian War of 1790. La Fayette recalls the lover of liberty who left the brilliant society of the French capital, to encounter the hardships of a struggle against odds in a wild and foreign land. Terre Haute and Vincennes carry us to the land of the facile Gaul, and remind us of his attempt to establish settlements from the Lakes to the Gulf. New Albany is associated with *Old Albany*, on the Hudson, some of whose citizens no doubt had a hand in establishing and naming our town. Lifting the veil of the past a little farther there stand the Patroons in their jack-boots, the Dutch West India Company, the proud Duke of York and Albany, afterwards James the II, and the rough-shod subjugation of the slow-brained Hollanders by the aggressive Englishmen. Every hill, stream, pond, and lake has its geological history. Almost the sole condition necessary to the use of this interesting matter is that the teacher should possess a knowledge of what so bountifully exists.

It is true that history and geography are different subjects, and one should not be imported in large quantities into the other, but it is also true that either subject is better from illumination by side-lights from the other.

The ideal of preparation for teaching, at which we should aim, is set forth thus:—

Now it must be honestly admitted at the outset that there is no short cut or royal road to success in teaching geography. No cramming or "getting up," the lesson can lead to any satisfactory result. The teacher must be content patiently and thoroughly to master his subject, and to watch and measure the progress of his scholars by his own solid advancement. He should begin by divesting himself of the common notion that the teaching of geography can be taken up by anybody. When he has realized what geography in the true sense is, he will recognize that to make satisfactory use of it for purposes of instruction, demands qualifications of no mean or ordinary kind. He will see that a wide range of reading is absolutely necessary to him, and that he must equip himself with such a store of illustrations gathered from all departments of knowledge, as will enable him to elucidate each subject as it arises in the course of his tuition. He will perceive also how needful it is that he should himself possess such a practical acquaintance with his subject as mere reading will not

give unless confirmed by observation and reflection. Thus furnished he will find himself independent of class-books. Instead of contenting himself with hearing his pupils repeat a lesson which they have got by heart, he will make a text from which he will lighten up the subject till even the dullest boy can hardly fail to understand and take interest in it.

How, now, would this master of the subject have us teach it? He would found all geographical teaching on the personal observation of the pupil. The home locality furnishes the child with the basis for all the geographical conceptions he forms at school, or, for that matter, anywhere else. This does not mean impossible things in the way of transporting the child over a large area of country in an incredibly short time. Some teachers seem to think that to employ observation in teaching this subject, they must have a genuine Aladdin's lamp and take the pupil successively to Blarney Castle, the Kyles of Bute, Oshkosh, Finster-aar-horn, and Kangaroo-ville. On the contrary, he should be set to work on the every-day objects over which he has stumbled all of his life. The ordinary child needs to have his eyes opened, far more than he needs an enchanted blanket to carry him to the ends of the earth.

It is barely possible that Prof. Geikie intends the teacher to take occasional strolls with his pupils. All this is well enough and can be done, croakers to the contrary notwithstanding. But the main reliance is to be placed on awakening the pupil's interest, and thus inducing him to keep an eye on the objects of study wherever he may be.

Maps are given a high place. There should be maps to show coast-line, maps to present the physical features of continents and countries, and still others for rivers, plants, animals, climate, population, towns, railways, and features of similar importance. Photographs are now very cheap and very good. Pictures may be had almost for the trouble of cutting them out and pasting them in suitable form. Wherever samples of natural objects, as tea, coffee, ores, stone, coal, silk-worm, lava, tropical plants, and scores of other things that might be mentioned, can be obtained, they lend zest, interest, and force to teaching. Manufactured goods are no less desirable. If the teacher is to stay in school longer than two successive summer solstices, he would do well

to accumulate a little museum of illustrations. It will repay him in more ways than one.

Two things are recommended by the Scotch professor that have been tried and work well: modeling and the use of blank maps, to be filled in by the pupil. The recipe for modeling is especially good. Take a board and lay off on it the country to be modeled, locating mountains, rivers, lakes, and such other features as may be desired. Then bore holes and set in pegs the height desired for the mountains, and mold to them. The pegs for the rivers will of course be very short, but they will serve to fix the place of the stream. In this way the difficulties that ordinarily render molding nearly worthless, are sufficiently overcome to permit its use with ease.

PRIMARY DEPARTMENT.

[This Department is conducted by HOWARD SANDISON, Professor of Methods in the State Normal School.]

PREPARATORY WORK.

A LITTLE exercise suggested by *The Quincy Methods* is a good one for the time between half-past eight o'clock and nine, when it is impossible to conduct a regular recitation. If the class in Number is working with twelve, have some early pupil place twelve cubes on each desk. When all are supplied, tell some child to "go to sleep" while the remainder of the class arrange the cubes. One will leave all of them on the desk, arranging them in some pleasing design. Another will hide two, another five, another seven, another eight, another four, etc. In a very short time all are ready and the pupil is "waked up." He passes from desk to desk naming the number subtracted from each, e. g., two and ten are twelve, five and seven are twelve, eight and four are twelve, four and eight are twelve.

As the seats fill name a pupil from each row to "go to sleep," when the work becomes more rapid.

It has been found that the pupils come more promptly if they are looking forward to this bit of play-work in the morning.

When the second grade has studied the animals of two or three countries (as the cold, the desert, and mountain countries), let some child (having in mind some animal) stand before the class. The class may now ask questions such as these:—

“In what country does it live?” “What kind of a coat does it wear?” “Has it hoofs or claws?” “How many toes has it?” “Does it eat animals or vegetables?” “Is it a quadruped or a biped?” “What is it good for?” etc., etc.

All these questions are to be answered without giving the name of the animal. When enough questions have been asked, the name may be given, when the little teacher will decide “right” or “wrong,” and choose some one to take his place.

A plant or animal may become the subject of such an exercise. With more advanced pupils a city, a river, a country, an event, a person may be chosen.

Reversing the foregoing exercise, send some person to the hall, close the door, and show to those in their seats a card with a picture of the animal upon it. The pupil may now return and he may be told by each in order that: “It lives in the cold country.” “It lives on the land.” “It is a quadruped.” “Its fur is used for clothing.” “Its flesh is used for food.” “It is white.” “It eats animals,” etc., etc.

When all have finished he will be ready to draw his inference,—“The polar bear.”

FANNIE S. BURT.

SCHOOL DEVICES.

IN Shaw and Donnell's “School Devices,” among many others of the same nature, are found the following helpful suggestions for teachers:—

“*A Way to Prepare Pictures for Young Pupils.*—If you use pictures for language work in the lowest grades, an excellent plan is to fasten the pictures upon stiff paper or pasteboard, leaving an edge or border around the engraving. On this border write such words as you think the pupil will probably wish to use, but which are beyond his knowledge to spell. In this manner a difficulty to the pupil's composition is removed; for if un-

aided in this way, he works under a restriction that discourages, because the work is simply too hard."

"Word-developing.—Say to the class, 'There is a man standing on a small island in the middle of a lake. How will he get to the shore?' Some will answer, 'He will swim;' others, 'He will row over in a boat.' Ask them to describe the manner of rowing, and let a figure of an oar be drawn on the board. Write "oars", "rowed", "swim", upon the board. 'If the man stops rowing, what will happen to the boat?' 'It will float.' 'It will drift.' Ask for the full meaning of "float" and "drift," and write them on the board. 'What will happen if the boat gets into the rapids?' 'Upset,' will be answered. This may be continued until a sufficient number of words have been developed. Let each word be correctly spelled and pronounced; and accurately defined. Let each pupil in turn form a sentence with one or more of these words in it, and write it on the board. Finally, tell the class to write out the whole story which has been outlined, and bring it to be read at the next recitation."

"A Suggestion.—A child learns best how to spell a word when he wishes to use it, and the wise teacher will constantly create that want. When a word is written in black or white, it stamps itself much more firmly upon the mind than when merely committed to memory. In writing, the hand forms the word, and the child will long remember just how he formed it, and its appearance on the board or slate."

"Sketches of Objects for Use in Spelling.—In primary spelling work, the teacher may make rough sketches of different objects on the board, and ask the class to write the names of these upon the slates. If any do not know the spelling of a particular word, write it on the board. After this the pupils may be asked to tell what they can about these objects, and a short description of each may be written on the board and copied on the slates. The sketches may be of a number of objects that are connected, and about which a short story can be made. This will give the class practice in invention. It will not take much skill on the part of the teacher to make these sketches, even if his knowledge of drawing is limited."

"A Test outside the Spelling-book.—Lay aside for a day the monotonous spelling-book, which contains a large percentage of words with which the pupil's mind should not be burdened, and try an exercise like the following:—

Let the pupils take their slates and write their own names in full.

Write the teacher's surname.

Write the name of the county in which they live.

Tell where Scotchmen come from.

Tell how old a boy is, who was born in 1879.

Write the names of four winter amusements; of four summer amusements.

Tell how many days in this month.

Mention what we plant to get potatoes.

Give a definition of "druggist."

Name six pieces of furniture.

Name six kinds of tools.

Write the names of the seven days.

Name the year, month, and day of the month.

Write a verse from memory."

REPORT OF READING LESSON.

(SECOND YEAR GRADE.)

THE teacher assigns the lesson (found in "Book on Cats and Dogs," by James Johonnot) to the 2's, in the following words:

2's will find this lesson on page 18. (The pupils had never seen this lesson before. The class take up the reading books.)

The teacher says: Open to this lesson and pick out the words you do not know, put them on your slates, and I will ask you about them after awhile.

(After the assignment of the lesson to the 2's, the teacher takes up a lesson in Form with the 1's. This lesson with the 1's in Form occupies about fifteen minutes.)

(After finishing the lesson with the 1's in Form, the teacher takes up the lesson which she had assigned to the 2's.)

Teacher. 2's: Slates on the left side of the desk. Turn the books over. (She examines the slates. She writes on the board

the word "visit.") See if you can find any word in it that you know. A pupil: Sit.

Teacher: Another. Pupil: Is. (The teacher writes "is" on the board.)

Teacher: Who can find another word? Pupil: It. (The teacher writes the word "it" on the board.)

Teacher: This word is what? (pointing to "is"). Class: Is.

Teacher: This word is what? (pointing to "it"). Class: It.

Teacher: What does it need to make this word "visit"? Class: V.

Teacher: How does "v" sound? (Class gives sound of v.)

Teacher: This word is what? (referring to "is"). Class: Is.

Teacher: This word is what? (referring to "it"). Class: It.

Teacher: Put the sound and the words together and make the word. If you can find what the word is, you may raise your hands. (Several hands raised.) Those of you who can not tell what the word is, may stand. (Several stand.) This says what? (pointing to v, is, it, on the board).

That part of the class who are standing: V-is-it.

Teacher: What is this? (v). Those standing: V.

Teacher: What is this? Those standing: Is.

Teacher: This? (it). Those standing: It.

Teacher: The class may give the sounds again.

Class: V-is-it.

Teacher: Again. Class: V-is-it.

Teacher: Give the sounds together as well as you can.

Class: V-is-it.

Teacher: Who can tell what the word is? (A number of hands raised.) Those who can not get the exact word may pass out into the hall. (They pass out.) What is the word, Jennie?

Jennie: Visit.

Teacher: What is the word, Charlie? Charlie: Visit.

Teacher: What is it, Bertha? Bertha: Visit.

(Those who have been out are called in, and each of them, except one, whispers to the teacher the word "visit".)

Teacher: Do you think of the word, Jessie?

Jessie: I think I do.

Teacher: What is it? Jessie: Visit.

Teacher: What is the word, Florence? Florence: Is-t.

Teacher: The first sound is "v"; put those words together and that sound—v—is-it. Florence: V—is-it.

Teacher: That is right. You may think of it while the rest open the books and find the word in the lesson. (Class open books.) Attention just a moment. (The teacher indicates, by putting her hand on it, the page on which the word occurs.) Is there any one who can not find it?

Ralph: There is some torn out of my book.

Teacher: That part is not torn out. (All of the class find the word.)

Teacher: Now we are ready for another word. I would like to have you examine it carefully while I am writing it. Perhaps you can tell me what it is while I am writing it. (She writes the word "several" on the board.) Look and see if any of you can find a word, or a part of a word, that you know.

Pupil: I see a part of seven. (Teacher writes the word "seven" on the board.)

Teacher: What else do you see? Pupil: See.

Teacher: Yes, but I have that already in "seven". What else? Pupil: All. (Teacher writes the word "all" on board.)

Teacher: What else? Pupil: Ever. (Teacher writes the word "ever".)

Teacher: This word is what? (seven.) Class: Seven.

Teacher: Pronounce the word plainly again. Class: Seven.

Teacher: This word now, (ever.) Class: Ever.

Teacher: Again. Class: Ever.

Teacher: This word, (all.) Class: All.

Teacher, (pointing to the word "seven"): What of this word do we not need to make the word? Pupil: En. (Teacher erases "en".)

Teacher: What do we not need of this word? (ever.)

Pupil: I think we do not need "e".

Teacher: What else? Pupil: V.

Teacher: Now what do we not need of this? (all.)

Pupil: One of the l's erased. (The "l" is erased.)

Teacher: Now what does this say? (Sev-er-al.)

Class: Sev-er-al.

Teacher: But in this word (sev-er-al) this part (al) does not say "all", it says "al"; so "all" was not a good word, but you could not tell that. Give the sounds again.

Class: Sev-er-al. (Giving a broad sound to "a" in "al".)

Teacher: Not *all* (giving a broad sound to a) but *al*. Again.

Class: Sev-er-al.

Teacher: Do not say "al" quite so hard.

Class: Sev-er-al (pronouncing the word correctly.)

Teacher: Say the parts to yourselves. (They say the parts.)

How many already know the word? (Several hands raised.)

Those who do not know the word may stand. (The rest of the class stand.) Give the parts. Those standing give the parts—sev-er-al.

Teacher (to Jessie, who raises her hand): Jessie, put those parts together, and you will have a word that you use very often.

Jessie: Sev-er-al.

Teacher (to Jessie): Do you know the word?

Jessie: I think I do. (She sits down.)

Chester raises his hand.

Teacher: Chester, what are the sounds? Chester: Sev-er-al.

Teacher: Put the parts together and you will have the word.

Chester: Sev-er-al. Carrie raises her hand.

Teacher: Carrie, say the parts. Carrie: Sev-er-al.

Harry raises his hand.

Teacher: Harry knows the parts. What are the parts?

Harry: No, I don't know them.

Teacher: The class may give the parts once more very carefully. Class: Sev-er-al.

Teacher: Again. Class: Sev-er-al.

Teacher: Do you think you know what it is, Nellie?

Nellie: I think I know what it is.

Teacher: Those who do not know the word may be excused. I am sorry you can not think what the word is. (They go out.)

What is the word, Jessie? Jessie: Several.

Teacher: Right. What is the word, Bertha?

Bertha: Sel——

Teacher: Think a moment. Bertha: Several.

Teacher: That is right. What is the word, Charlie?

Charlie: Several.

Teacher: What is it, Harry? Harry: Sev-er-al.

Teacher: Put together the whole of it. Harry: Several.

Teacher: What do you think it is, Jeanie?

Jeanie (in a low tone): Several.

Teacher: I think that is right, but I can not hear you very well. If I were to tell Jeanie a story, and tell it so she could not hear it, I think she would not enjoy the story.

(The pupils who went into the hall are called in. Each whispers the word to the teacher.)

Teacher: Open the books and find the word "several" and show it to me.

(The class find the word and show it to the teacher.)

VARIE TIES.

GRACE A. BUSBY.

HORACE says:—

"Sounds which address the ear are lost,
And die in one short hour; but that which
Strikes the eye lives long upon the mind;
The faithful sight engraves the knowledge
With a beam of light."

Fellow-teachers, do we fully agree with Horace, and profit by the words spoken so long ago? Have your pupils trouble in remembering history or geography lessons?

Save pictures, cut from papers or old books. Hunt up an old history and geography that belonged to your grandfather, Aunt Martha, Uncle Jim, father, mother, or any of the kin. Paste them on card-board; have the children study them, write descriptive stories about them, telling of the climate, productions, industries, and habits of the people, if a lesson in geography.

If in history, have them write a description of the scene, giving place, date, causes, events, and results, each one writing as much as can be found out about it. Each will have something that the others have not, and will be interested in the recitation, and each will try to have the most.

Get a quart of shoe pegs, and with diamond dyes color them different colors. On the board put the outline of a ship, boat, gun, fish, etc. Distribute the shoe pegs, and have the children represent the outlines on their desks with them. This will keep many little fingers and minds busy, without which we can not hope to have order.

From card-board cut squares, triangles, circles, ovals, and other figures. Through the circles draw a diameter and radius; through the square a diagonal, and so on. Have one pupil get all the red triangles; another, the blue or green; another, the brown squares; giving each pupil a different color or figure.

Now, when the leaves are falling, have them bring leaves to school; draw them, adding veins and stems, with exactly the right curves and twists. Investigation, discrimination, and a love for the beautiful in nature, is cultivated, by having a general talk about the different leaves and plant-life.

An interesting way to teach multiplication is to have the pupils place their hands, with fingers spread, upon the slate, draw it, put the number you multiply by in centre of the palm, and the number you multiply where the fingers begin; the result at the ends of the fingers.

Place two or three sentences, at a time, on the board, omitting every other letter, which the children are to supply. At other times place the sentences, omitting every other word. Give them a list of words for which they are to write synonyms. Place letters on the board from which they are to form as many different words as possible, as star, rats, arts, tars, etc.

A pleasant and profitable way to spend Friday afternoon is to have a number of ten, five, three, and one cent pieces. On your desk arrange bundles of counting-sticks, box of matches, sticks of chalk, shoe-pegs, pictures, figures from card-board, and any thing you can use. Select a merchant and two clerks from the primary arithmetic class, give them a part of the money and distribute the rest among the class. Mark each article so the buyers will have to receive change. Let the pupils buy the articles, pay for them, and have a judge to see that they get the right change.

Larger pieces of money can be used if the teacher wishes.

GODDART, KANSAS.

THE past lives but in words; a thousand ages were blank if books had not evoked their ghosts, and kept the pale, unbodied shades to warn us from fleshless lips.—*Bulwer Lytton.*

COUNTRY SCHOOL DEPARTMENT.

[Conducted by W. H. CAULKINS, Supt. Tippecanoe County.]

A HINT TO TOWNSHIP TRUSTEES.

THE following is taken from a county superintendent's record of visits: "School No. —, ——— Township. No. pupils enrolled, 17; No. present, 5—all primary. House and grounds in fair condition; large black-board in good condition, but little used; Unabridged Dictionary, part of cover gone, many illustrations cut out—teacher said no one used it; one 8-inch globe, broken off stand, looks as if it had been used as a foot-ball; one lunar telluric globe, sun and moon gone, cog-wheel broken, useless; one map of Indiana, several counties punched out; one dissected map, many parts missing; several outline maps, used as window-curtains; physiological charts, badly damaged, not used; a portion of a reading chart, etc. First cost of apparatus one hundred fifty dollars. Teacher said none of the apparatus was used to any extent. Young teacher, first school; holds a six months' license; did not have any normal training previous to commencing this school. No regular order of exercise. Because this is a small school, trustees have employed cheap teachers for it, for several years. Will recommend the present trustee to stop buying apparatus for this school, and invest more money in *brains*."

While this school is an exception, no doubt its counterpart exists in many localities. It is still a prevalent idea that the young, unskillful teacher may, with safety, be placed in charge of the small, backward school. The opposite is the correct course for trustees to take.

HERE it lies on the desk—the dictionary: battered and beaten by the storms of successive winters. Its rusty old coat is frayed at the edge and ripped down the back; it has dwindled down to half its weight when it was new; its life-blood is oozing away day by day, and at last it will itself be gathered to its fathers.

What will take its place? We suggest the following plan, which has been tried and found to work quite successfully:—

The trustee having to supply his schools with dictionaries, bought three dozen *Webster's Academic Dictionaries*, and distributed them to his schools, three to a school. They cost him, at a special rate, \$1.75 each, thus making the cost per school for the three, \$5.25—a saving of \$3.75 on the price of the Unabridged. There are generally not more than four grades in the country school old enough to use a dictionary, and the three dictionaries practically supplied each grade with a dictionary. They were much easier to handle than the Unabridged, not so easily injured, and answered every purpose of the large work. It is seldom, indeed, that one wishes to find a word not in the small book. They were more convenient for the pupils to use and saved time in finding words, because there were not so many other words to skip over. The meanings of the word would be found without wading through all the rare uses. Each grade had the exclusive use of one book, and it was consulted a dozen times where the Unabridged had been consulted once. The book lasted fully as long as the Unabridged. Cheapness, convenience, and practical success recommend the plan.

PLAIN HINTS.

Is it of any use to ring your bell a dozen times when one tap is all that is necessary?

Among the appliances of a country school none are more necessary than wash-basins, towels, soap, combs, and mirror.

We think one of the most frequent causes of failure to solve problems lies in the inability or the failure of the pupil to image to himself the conditions of the problem.

If eight words are learned and used correctly in sentences daily, a school-term of 140 days will furnish the pupil a vocabulary if 1000 words that he can use; and three such terms will give him 3000 words—much more than the ordinary well-educated person ever uses.

Keeping children after school is a punishment very much condemned in the country. Parents object strongly and generally with a good deal of reason. Work done after school hours is usually of little value, and is soon forgotten. Try something else in place of it. Whipping itself is to be preferred.

One teacher had no scraper at the door, so he begged an old wagon tire of the farmer he boarded with, took it to the blacksmith shop and had it bent into a long strap which he nailed on the side of the board-walk leading to the door. The whole cost was nothing but a little thoughtfulness, and the income was a much cleaner school-house.

THE SCHOOL ROOM.

[This Department is conducted by G. F. Bass, Supervising Prin. Indianapolis schools.]

CLAY WORK.

WHAT wonder the children always enjoy a lesson in clay? Are not we grown-up children carried back to the happy days of mud-pies, while we work in the fascinating substance which is as easily moulded as are the hearts of the little ones to whom we are given as helpers?

The eyes brighten as other work is laid aside, and the clay taken from the jar, and placed upon the moulding-board to be cut into little blocks with a piece of stout thread or wire; the hands are closely folded as a block is placed upon a sheet of manilla paper before each child.

When all is ready, the block is divided, one-fourth put aside, and the remainder modelled into a bird's nest.

The fingers work busily, while the teacher tells of the oriole's nest which hung from the drooping branch of an old elm in the garden where she played when a little girl; and of the phoebe-birds, too, that for several summers built their home under the beams of an old barn.

This brings out from the children as many stories as there is time to hear.

The nests being "built," the smaller piece of clay is separated into four parts; these bits are made into eggs, a lesson upon the ovoid having been, of course, previously given. When the eggs are placed in the nest, the children contemplate the effect with great delight, and are much interested in learning the following new verses, which are all the more enjoyed that they contain a riddle which no one need "give up:"

"Four little balls in a queer gray pocket,
Rolling about as the wind would rock it:
For up, up, up,—as high as could be,
It swung from the branch of a sycamore tree.

Hard little balls; but ere long they are breaking;
Not from the rolling, and not from the shaking;
Something inside of the ball comes to knock it,
And now there is music inside the gray pocket.

Keen little eyes, and a soft, gentle twitter;
Flutter of wings and a quick golden glitter;
Songs from the depths of the forest are ringing,
And empty and lone the gray pocket is swinging."

Following lessons upon the sphere—and upon another day—cherries are made, using bits of dried grass-stalks for stems; again, a bunch of grapes or currants is the result of an exercise.

Still another object based upon the sphere, which the children always enjoy making, is the tea-pot. To make this, the sphere is flattened upon opposite sides, a tiny knob placed upon the top, and a curved handle and a spout upon the rounded sides.

A clay sphere may be separated into halves, and one hemisphere used as the crown of a hat, be placed upon the other, which can be flattened, and curved into a brim of any shape the child's fancy may suggest.

From the cylinder, spools, muffs, and rolling-pins may be made.

There is nothing more pleasing to the little ones than clay modelling, and so very much may be taught in connection with this sort of manual work that one must feel the time thus occupied is not only a delight, but of real and lasting benefit.—A. E. F., in *Popular Education*.

ASSIGNING LESSONS.

THERE, probably, is nothing new to say on this subject, but there are new teachers who may need to hear the old that has been said. These young teachers have new pupils to whom they must assign new lessons every day. To do this properly takes a previous preparation. It will not do to assign three inches of geography and four of history and six of arithmetic, etc. "Take the next lesson" is no better, even if the pupils are told to "look up" the words they do not understand. They do not know whether they understand them or not. There are teachers who are sensible of their misery, in this direction. They know they do not know how to assign a lesson. There is always hope for a person who knows he does not know. Such a person will set to work to learn. Such a teacher asked the writer some time ago, How to assign a geography lesson so that the pupils might get some good out of their study-hour. They were studying the "Far West" as given in an elementary geography. The teacher had decided upon the plan of studying the group first as a whole. The followig was suggested:

1. Where.

- (1) What touches the group on the north?
- (2) On the east?
- (3) On the south?
- (4) On the west?

2. The Rivers.

- (1) The largest.
Where it rises.
Tributaries from the west.
What they flow from.
- (2) Other Rivers.
Two flowing westerly.
One flowing southeast.
From what do they flow?

3. Kinds of Land.

- (1) Where each kind is.
- (2) What direction it slopes.
- (3) Where the highest.

4. Largest City.

- (1) Where is it?

This outline was placed where the pupils could see it during their study-hour. It will be observed that the requirements are such that the pupil may answer easily by a careful and thoughtful study of the map in connection with the text. When the pupil follows such an outline there is no inclination to commit things to *say*. By his effort during the study-hour, he has gathered some facts that will enable the teacher to get him to see beyond the map to the real thing the map represents. This should be done by judicious questioning during the recitation hour. The lesson during the recitation should be as informal as possible. Get the pupils to talk.

WHAT TO DO.

Children should be taught what to do with certain business papers. Take the ordinary bill.

Mr. JOHN DOE,

To WILLIAM BROWN, Dr.

Oct. 24, 1887. To 1 copy *Indiana School Journal*, \$1.50.

Mr. Doe receives this through the mail. He wishes to send the money to the editor. He buys a postal-note, encloses it in a letter of a page or more, telling that he wishes a receipt and why he wishes it; but does not enclose the bill and return it to the editor. Now the editor, who is a very patient man, has to turn to his books to ascertain whether this amount is *all* that is due. Then he must fill out a receipt. If his edition has as large a subscription as it ought to have, and he "trusts", as many editors do, the time thus wasted amounts to a great deal in a year. The debtor should have returned the bill and the editor would have receipted it and returned it to the debtor.

The pupils should be taught how to get a money order or a postal note, and what they must do to get either cashed.

A bank check or draft is made payable to the order of the pupil. What must the pupil do to get it cashed at a bank? Teachers should teach such things. They may not be in the books on arithmetic, but they should be taught.

EDITORIAL.

Don't send us 5-ct. and 10-ct. stamps. We can't use them.

When you send money for unpaid subscriptions, please name the agent with whom you subscribed.

When your Journal does not reach you by the fifteenth of the month, write for it at once and it will be resent. If you wait two or three, or as is sometimes the case, six months, the issue may be exhausted and your file permanently broken.

WE CAN'T DO IT!—Please do not ask us to send the Journal for a certain number of months to one address and then send it to another: we can't do it. We will change as often as asked to do so, but must be notified of each change.

REMEMBER that all postponed payments on the Journal are due *this month*—December. In many instances the Journal's rule of advance payment has been suspended to accommodate teachers, but with the distinct understanding that payment should be made not later than the Holidays. Agents are all expected to make settlement by January 1, 1888, and they can not do this unless teachers settle with them prior to that date. When it is more convenient to send money directly to the editor at Indianapolis the agent gets due credit. This little "RE-MINDER" will doubtless serve the desired purpose and relieve these pages from future notices of similar import.

THE STATE ASSOCIATION.—Attention is called to the Program of the State Teachers' Association, on another page. It is certainly a good one. The fact that it is less crowded than usual is of itself a commendation. This feature will afford some time for discussion and a little time for breathing. *Read carefully the directions in regard to securing reduced rates on the railroads.* There should be an attendance of 500 teachers, and the *enrollment* should equal the attendance. It is hardly honorable to attend the association and enjoy its privileges and advantages and then refuse to bear a share of the necessary expenses.

ANSWERS TO STATE BOARD QUESTIONS.

As heretofore stated, the State Board of Education should not have the credit of answering the State Board Questions—neither are they held responsible for the answers. In preparing the "questions," of course the work must be done by the individual members, but they are not published until they have been submitted to the board and approved

by it. As the "answers," made from month to month, could not be submitted to the board as a whole, it is evident that it should not as a body share either the responsibility or the credit.

That the board may be entirely independent of the "answers," arrangements have been made whereby *all* the questions are hereafter to be answered by persons not members of the State Board. Persons specially qualified have been secured, and the standard will be fully maintained.

STUDYING PSYCHOLOGY.

In a late issue of the *New England Journal of Education*, the editor calls attention to the fact that 50 Boston lady teachers have banded themselves together for the study of psychology. They meet fortnightly with Dr. Dunton, head master of the city normal school, as their lecturer and instructor.

He says if there is another city in America where ladies are thus banded together for philosophical study, he would like to know it. For his information and for the encouragement of others we give the following account of the work of this character that is being done in this city.

There are about three hundred teachers employed in the public schools. There are six clubs made up of volunteer members from the corps of teachers. Four of these clubs meet weekly and two fortnightly. The principal's club has thirty-four members—all ladies but seven. It meets every Tuesday evening under the leadership of Supt. L. H. Jones, who was principal of the city normal school for twelve years. Mr. Jones has made psychological study a specialty, and is, therefore, a very valuable leader. This club has been in existence about ten years, during which time it has studied Porter's *Human Intellect*, Bain's *Education as a Science*, and Fröbel's *Education of Man*. It is now studying the *History of Education* by Painter.

The superintendent has another club numbering fifty. It is composed of lady teachers from the intermediate schools. This club has been in existence two years. They studied Fröbel's *Education of Man*. This year they meet weekly and are studying psychology, with Sully's *Hand-book of Psychology* as a text-book.

The superintendent of the primary grades has two clubs of fifty teachers each. They meet fortnightly and are studying Fröbel's *Education of Man*.

The principal of the city normal has a club of twenty teachers from all grades, who meet weekly to study Rosmini's *Method in Education*.

One supervising principal has a club of thirteen that meet in their own building weekly. They are studying Sully's *Hand-book of Psychology*. Last year this club studied White's *Pedagogy*. *Journal of Education*, please copy.

OFFICE SEEKING IN THE STATE ASSOCIATION.

The presidency of the State Teachers' Association is an honorable position, and when a person has been chosen to the position without any connivance of his own, it is a distinction that any one may be proud of. For some years past unpleasant feelings have been aroused, and disgrace has been brought upon the association because certain parties have undertaken to "set things up" and control the election to this office. The writer has received letters asking his support in the election of the person sending the letter, and he has known that others received letters of the same import. As early as in November preceding the last association the writer was approached in the interest of a candidate for presidency, and others were thus early "sounded."

It is definitely known to the writer, as to others, that not unfrequently when the time comes in the association to nominate a person from each congressional district whose duty it shall be to nominate officers, the whole thing has been "set up," and it is definitely understood who shall be nominated in each instance, and he is pledged for some certain candidate.

The introduction of political methods in the association is deeply to be regretted, and should be discontinued. It is but little honor to any one to hold the place when it has been secured by such means. It is only fair to say that frequently the person nominated is not a party to the "setting up" schemes; and it is only fair to say that none but worthy persons have ever been chosen to the place. It is proper to say that there was no irregularity in the election of the present incumbent.

There is no reason why a person may not have a preference as to who shall be president, and express it to others, and there is no reason why such person should not go to members of the nominating committee and urge the person of his choice, but there is serious objection to struggling for the office, and especially to the "politician's method" above named.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR OCTOBER.

[These questions are based on the Reading Circle work of last season.]

WRITING AND SPELLING.—The penmanship shown in the manuscripts of the entire examination will be graded on a scale of 100, with reference to *legibility* (50), *regularity of form* (30), and *neatness* (20). The hand-writing of each applicant will be considered in itself, rather than with reference to standard models.

The orthography of the entire examination will be graded on a scale of 100, and 1 will be deducted for each word incorrectly written.

SCIENCE OF EDUCATION.—Present as clear and complete a view as you can, in reasonable space, of any one of the following subjects:

1. Education in the Orient.
2. Education in ancient Greece and Rome.
3. The Educational Theories and Systems of the Middle Ages.
4. Bacon's view of Education, and his influence on the educational world at the present.

READING.—1. For what object should pupils be instructed (1) in silent reading? (2) in oral reading.

2. State two plans for preventing pupils from memorizing reading lessons.

3. To what extent would you require pupils to read *at sight*? Give reasons.

4. What bad habits do pupils often form by *looking over* the lesson while it is being read orally by other members of the class?

5. What benefits should result from the use of supplementary reading matter?

ARITHMETIC.—1. What is $\frac{3}{4}$ of that number of which 16 is $\frac{4}{5}$? 5, 5.

2. A man owning $\frac{2}{3}$ of a property sold $\frac{1}{3}$ of his interest at the rate of \$18,000 for $\frac{3}{5}$; what was the whole property worth at that rate? 5, 5.

3. Three pieces of carpet are 35, 56, and 84 yards respectively; what is the longest strip into which they can all be cut without waste? 5, 5.

4. A person left an estate of \$50,000 to 4 heirs, A to receive 1 share, B $\frac{1}{2}$ share, C 2 shares, and D $1\frac{1}{2}$ shares; what did each receive? 5 pts.

5. Solve by cancellation: $\frac{3 \times 4 \times 5 \times 6 \times 7 \times 8}{4 \times 5 \times 6 \times 7 \times 8 \times 9} \div \frac{1 \times 2 \times 3 \times 4}{2 \times 3 \times 4 \times 5}$ 5, 5.

6. A note for \$1000, due in 1 year, with 6% interest, was discounted in bank 2 months before maturity at 10% per an.; give proceeds. 5, 5.

7. At \$4.84 per £, how much sterling exchange can be bought for 200 double eagles, 80 single eagles, and 8 half eagles? 5, 5.

8. Solve: $\sqrt{\frac{294}{486}}$

9. The hands of a clock are exactly together at 12 o'clock; at what hour after that will they be together for the third time? 5, 5.

10. What amount of insurance must be taken to cover a net loss of \$12,000, and the premium at 1%? 5, 5.

GEOGRAPHY.—1. Bound Switzerland; locate its capital and its metropolis.

2. Explain the phenomenon of twilights. When and where on the earth is the twilight longest?

3. Describe the climate of California.

4. What are the chief exports of China?

5. Describe the Panama Canal, and the difficulties met in its construction.

6. Where is Ceylon? Hayti? Aleutian Islands? Orkney Islands? Trinidad?

7. What is the form of government of Brazil?

8. Where is Lorraine? To what country does it now belong?

U. S. HISTORY.—1. Give the boundaries of the United States at the close of the Revolutionary War. State what additions of territory have been made since, and state from whom each addition was obtained.

2. Give an account of the battle of Bunker Hill.

3. Give an account of the origin, growth, and present condition of Mormonism.

4. Give an account of the conspiracy of Pontiac.

5. (a) Name the remote causes of the Civil War. (b) The immediate cause. (c) The most decisive battle. Why? (d) What was accomplished by this war?

ENGLISH GRAMMAR.—1. State the likenesses and the differences between the complex and the compound sentences.

2. I think *that that* book *that* he mentions is a good one. Point out the use of each *that*.

3. The subordinate clause may be used as what parts of speech? Give an example of each, and designate.

4. Classify each of the following nouns: Bread, infantry, virtue, and tree.

5. Decline the simple pronouns, and state which forms of the simple personals are used in forming the compound personal pronouns.

6. Name four classes of adjectives, and give an example of each class.

7. Change the following sentences to the passive form, making the italicized words in each the subject: (a) The porter refused *him* admittance. (b) This artful fellow has imposed upon *us all*. State what other changes have been made in transforming.

8. Correct and give reasons for each correction: (a) Whom say ye that I am? (b) I have less moments to spend carelessly than you.

9. They traveled the entire day without *halting that* they might see the sunset from the *mountain* peak. Analyze.

10. Parse the italicized words in the last sentence.

PHYSIOLOGY.—1. Explain how pain may apparently be felt at the extremity of an amputated limb.

2. Why avoid very hot or very cold drinks at meals?

3. Show the structure of the skin, and thereby explain necessity for bathing.

4. Define secretion, and name five products of this process in the human system.

5. Name two habits which you wish your pupils to acquire as the result of the study of physiology.
6. What are the physiological uses of clothing?
7. What is a "cold" as explained physiologically?
8. Explain the process of assimilation.
9. What important facts in regard to the physical condition of his patient can a physician gain by examining the pulse of the former?
10. What is the process called aeration of the blood? Where performed?

NOTE.—Answer any seven of the ten.

ANSWERS TO PRECEDING QUESTIONS.

HISTORY.—1. Bounded on the north by the chain of great lakes, the Detroit and Niagara Rivers, part of St. Lawrence River, and Canada; on the east, by the Atlantic Ocean; on the south, by the Spanish Possessions; on the west, by a line drawn from the western point of Lake Superior south to the St. Croix River, and the St. Croix and Mississippi Rivers. Additions: Province of Louisiana, purchased from the French in 1803; Oregon, acquired by exploration of Lewis and Clark in 1806; the Spanish Possessions South, including Florida, ceded in 1819; Texas, reannexed and admitted in 1845; Mexican territory acquired by conquest, cession and purchase in 1848; the Gadsden Purchase, in 1853; and Alaska, purchased from Russia in 1867.

Gage with the British was confined to the peninsula of Boston; he determined to enlarge his lines. The Americans learning this proceeded to fortify Bunker Hill, but went by mistake to Breed's Hill, and in one night raised the earthworks, under Col. Prescott. The British discovered the works in the morning and immediately stormed it from their fleet, and proceeded to attack it by land. Marching up the hill they were repulsed with heavy slaughter; being reinforced they made a second effort and were again repulsed with heavy loss. Firing Charleston, and being reinforced they again attacked the works, when, the ammunition being exhausted the Americans orderly and slowly retreated down the hill, and the enemy took the works. The British lost over 1000, the Americans half that number, Warren among them. But the moral victory was with the Americans, who a second time proved able to cope with armed and disciplined troops.

3. In 1836 Joseph Smith claimed to have received a special revelation from heaven, under which he organized a new sect called "Mormons" or "Latter Day Saints." They settled in Missouri, but being regarded as dangerous were attacked, defeated, and driven out of the state. Settling at Nauvoo, Ill., they began a Temple and settlements. Smith and his brother were murdered in jail by a mob. In 1848 they

sold their settlement to a band of Socialists and emigrated to what was then called Deseret, and to California. In Utah, their chief settlement, Brigham Young, their leader, was made Governor by President Fillmore. Nominally acting under the United States government, he was in reality an autocrat. By means of missionary efforts they have acquired large accessions to their church, but generally from the lower and uneducated classes. The operation of the Edmunds' law is gradually working towards the cure of many of the evils connected with the sect, and towards its eventual disintegration, if not its extinction.

4. At the close of the French and Indian War, when the larger part of the French territory, with the forts, had been given up to the British, the Indian tribes of Canada and the Ohio Valley found themselves shut out, and left to the mercy of their old enemies. Having been told by French traders that their father, the French King, had been asleep, but was now awake, and would recapture the forts, the Indians under the lead of Pontiac, the most bold, influential, and wily chief amongst them, made secret propositions, and under various forms of strategy succeeded in surprising and taking nearly the whole number of forts in the ceded districts, slaughtering and capturing large numbers of soldiers and settlers.

5. The remote causes of the Civil War were: The rapidly increasing value of slave labor in the South; the constantly growing desire to extend the limits of slave territory, from commercial, social, and political views; the increasing apathy of the North, when slave labor has become valueless, and the growth of the Abolition feeling, first on humane and social grounds, then more strongly on political and sectional ones; and the opposition of the West and Northwest to slavery, interfering as it greatly did with the settlement of those districts by a hardy, hard working pioneer white population.

The immediate cause was the split in the Democratic party, the election of Lincoln as President, and the attempt to strengthen and supply Fort Sumpter, in South Carolina.

The most decisive battle was Gettysburg, because it broke up the power of the South, and reclaimed the whole Northern territory under such circumstances as thoroughly disheartened the South, and proved the impossibility of success on their part.

The results were, the extinction of slavery in the whole country, the re-establishment of the Union on a firmer foundation, the compelling of the South to recognize the dignity and value of labor, and appreciate its necessity to their very existence, and eventually a unity and community of interests that will admit of no future break.

GEOGRAPHY.—1. Switzerland is bounded on the north by the German Empire; on the east, by the Austro-Hungarian Monarchy; on the south, by Italy; on the west, by France. Berne, the capital,

is in the western part, on the River Aar. Geneva, the metropolis, is at the southwestern extremity of Lake Geneva.

2. *a.* Twilight is due to the reflection of the sun's rays when below the horizon. The atmosphere above is illuminated by direct rays and the reflection from its illuminated surface brings to the earth a large amount of light. Twilight continues until the earth is 17° or 18° below the horizon. *b.* In mid-summer, about the poles.

3. The climate varies according to the elevation and latitude; but summer and winter differ less in their mean temperature than in the Atlantic states. The year has two seasons—the dry, from May to November; the rainy, from November to May.

4. Tea and raw silk.

5. The Panama Canal, now in process of construction, crosses the isthmus from Colon, on the Atlantic, to the Pacific, at the islands of Naos and Flamenco. It was at first, expected that the Canal would be open in 1889, but the difficulties have proved to be so much greater than it was anticipated that it is now thought that more time will be required. These difficulties are due to the unhealthy climate under a tropical sun, in a country subject to earthquakes, to the inundations of the Chagres River, to the fact that it has been found necessary to excavate about 20,000,000 more cubic metres of earth than was expected; and in consequence of all this, to the fact that the original estimates of expense have been found wholly inadequate, so that lottery bonds to the amount of millions of francs have been issued.

6. Ceylon is an island southeast of the peninsula of Hindostan. Hayti is one of the West Indies, east of Cuba. The Aleutian Islands are on the southern border of Behring Sea. The Orkney Islands are north of Scotland, in the Atlantic Ocean. Trinidad is north of the eastern part of Venezuela, opposite the mouth of the Orinoco River.

7. Brazil is a constitutional monarchy.

8. Lorraine lies west of the upper course of the Rhine River, by which it is separated from Baden. It now belongs to the German Empire.

GRAMMAR.—1. They are alike in that each is composed of more than one clause, and each expresses more than one thought. They differ in that the complex sentence contains one independent, and one or more dependent clauses; while the compound sentence is made up of independent clauses.

2. *a.* *That* is a subordinate conjunction. *b.* *That* is a definitive objective, limiting the noun *book*. *c.* *That* is a relative pronoun, referring to the noun *book* as its antecedent, and is the object of the verb *mentions*.

3. *a.* It may be used as an adjective; as, "He most lives, *who thinks most, feels the noblest, acts the best.*"

b. It may be used substantively; as, "Know *that a small unkindness is a great offence.*"

- c. It may be used as an adverb; as, "A shadow came and lingered *where the sunlight stood before*."
4. *Bread* and *tree* are common class nouns, *infantry* is a collective noun, and *virtue* an abstract noun.
5. The possessive forms of the first and second persons; as, *myself*, *thyself*, *yourself*, *ourselves*, etc. The objective form of the third person; as, *himself*, *herself*, *themselves*.
6. a. Numeral; as, "The boy missed *four* words."
 b. Distributive; as, "*Each* day has its duties."
 c. Descriptive; as, "*Breezy* waves toss up their *silvery* spray."
 d. Demonstrative; as, "*That* scheme did not prove successful."
7. a. He was refused admittance *by the porter*.
 b. We all have been imposed upon *by this artful fellow*.
8. a. *Who* say ye that I am? *Who* is predicate nominative after *am*; as, Ye say that I am *who*.
 b. I have *fewer* moments to spend carelessly than you (have).
 An adjective expressing number is required here.
9. a. Complex declarative sentence.
 b. "They traveled the entire day without halting," is principal clause.
 c. "That they might see the sunset from the peaks," is subordinate clause.
 d. *They* is subject nominative of principal clause.
 e. *Traveled* is predicate verb, modified (1) by adverbial phrase of time, *the entire day*, (2) by adverbial phrase of manner *without halting*, and (3) by the subordinate clause, which denotes purpose.
 f. *Might see* is predicate verb of subordinate clause, modified by the object *sunset* and the adverbial phrase of place, *from the mountain peak*, etc.
10. *Halting* is a participle used substantively and is the object of the preposition *without*. *That* is a subordinate conjunction connecting the two clauses. *Mountain* is a descriptive adjective qualifying the noun *peak*.

ARITHMETIC.—1. $16 \div 4 = 4$ or $\frac{1}{4}$; $7 \times 4 = 28$; $\frac{3}{4}$ of $28 = 21$, Ans.

2. We are in doubt as to what it is $\frac{2}{3}$ of. Suppose it means $\frac{2}{3}$ of his share. $\$18,000 \div 9 = \$2,000$, $\frac{1}{3}$ of his share. $30 \times \$2,000 = \$60,000$, his share. $\frac{\$60,000}{2} \times 3 = \$90,000$, Ans.

3. G. C. D. of 35, 56, 84 is 7. 7 yds., Ans.

4. $1 + \frac{1}{2} + 2 + 1\frac{1}{2} = 5$. $\$50,000 \div 5 = \$10,000$. A, B, C, and D will get respectively 1, $\frac{1}{2}$, 2, $1\frac{1}{2}$ times $\$10,000$. A, $\$10,000$; B, $\$5,000$; C, $\$20,000$; D, $\$15,000$.

5. $\frac{3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 2 \times 3 \times 4 \times 5}{4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 1 \times 2 \times 3 \times 4} = 1\frac{2}{3}$, Ans.

6. $\$1.0605$, amount on $\$1$ for 1 yr. 3 da. at 6%.

$$1000 \times \$1.0605 = \$10605, \text{ amount on } \$1000.$$

$$\$1.013, \text{ interest on } \$1 \text{ for 2 mo. at } 10\%.$$

$$\$1 - \$1.013 = \$.987, \text{ proceeds on } \$1.$$

$$10605 \times \$.987 = \$10467.135, \text{ Ans.}$$

$$7. \quad 200 \times \$20 = \$4000; 80 \times \$10 = \$800; 8 \times \$5 = \$40. \quad \$4000 + \$800 + \$40 = \$4840. \quad \$4840 \div \$4.84 = \$1000, \text{ Ans.}$$

$$8. \quad \frac{2\frac{1}{2} + \frac{1}{2}}{3\frac{1}{2}} = \frac{3}{4}. \quad \sqrt{\frac{3}{4}} = \frac{\sqrt{3}}{2}.$$

9. They are together at 12 o'clock the first time; between 1 and 2, the second time; between 2 and 3, the third time. There are sixty spaces of the face of the clock, representing minutes. The minute hand passes over 60 while the hour hand passes over 5, so it goes 12 times as fast as the hour hand. At 2 o'clock the hour hand is 10 spaces (minutes) ahead. The minute hand must gain these 10 to overtake the hour hand. In going one space (minute) it gains $\frac{1}{11}$ of a space. $10 \div \frac{1}{11} = 10\frac{10}{11}$. They will be together at $10\frac{10}{11}$ min. past 2 o'clock.

$$10. \quad 100\% = \text{the amount insured.}$$

$$100\% - 1\% = 99\% = \text{the net loss.}$$

$$\$12,000 \div .99 = \$12121.21, \text{ amount insured.}$$

SCIENCE OF EDUCATION.—Each question would require a paper. As there are five questions, it would take more space than we can spare. Papers on these different subjects will appear in the Journal from time to time.

DEPARTMENT OF QUERIES AND ANSWERS.

This Department is conducted by J. C. GREGG, Superintendent of the Brazil Schools.
Direct matter for this department to him.]

QUERIES AND ANSWERS.

QUERIES.

- [43] How was Richard M. Johnson elected Vice-President?

T. N. J., *Brazil, Ind.*

- [44] How can the President defeat a bill without vetoing it?

Id.

- [45] Solve the last problem in Ray's New Higher Arithmetic.

EDGAR WHITE, *Trafalgar, Ind.*

- [46] Solve No. 5, page 286, in above.

GEO. E. WILLIAMS, *Cornettsville, Ind.*

- [47] Solve No. 100, page 407, in above.

U. S. C., *Honey Creek, Ind.*

- [48] A, B, and C are employed to do a piece of work for \$26.45; A and B are supposed to do $\frac{3}{4}$ of the work, A and C $\frac{1}{2}$ of it, B and C $\frac{1}{3}$, and are paid proportionally; how much does each receive?

C. L. CRAVENS, *Elmore, Ill.*

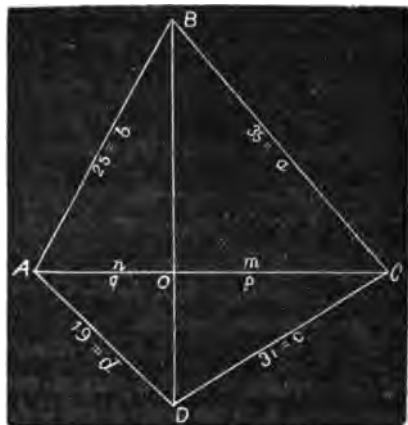
- [49] What is the capital of Wales? *Id.*
- [50] A was born February 29, 1799. How often did his birth-day occur, and when for the first time? C. E. R., *Edinburg, Ind.*
- [51] If Hiera's crown was an alloy of silver and gold, and weighed 22 oz. in air and $20\frac{1}{4}$ oz. in water, what was the proportion of each metal? G. D. SCOTT, *Eagle Branch, Tex.*
- [52] Is there a definite size for a printer's sheet, from which books are made? If so, what? CHAS. O. DU BOIS, *Moore's Hill, Ind.*
- [53] Three circles whose diameters are 24 ft., 20 ft., and 16 ft. respectively, touch each other externally; find the area of the triangular space between them. RABENF.
- [54] Where is the River Lethe? Where is the Vermillion Sea, and why so called? X. Y. Z., *Scottsburg, Ind.*
- [55] Where is Franklin State? Who is the author of the poem, "Forty Years Ago"? W. T. LONGWITH, *Hector, Ind.*
- [56] A uniform beam is carried by three men, one at one end and the other two with a hand-spike, so located that each man supports $\frac{1}{2}$ the weight; where must the hand-spike be placed? [By request.]
- [57] What are the "Pools of Peace"? T. W. SHIMP, *Salamonia, Ind.*

Quite a number of queries are held over for next month. Be patient, good friends, we will try to give all a chance, but there is a limit to our space.

Answers to queries must be received by December 14, or they will lie over for a month.

ANSWERS.

[18] It is easily shown that when the sums of the squares of the opposite sides of a quadrilateral are equal, the diagonals intersect at right angles. This is the case in this figure.



$$\text{Let } AC = 2x, \text{ then } BO^2 = a^2 - m^2 = b^2 - n^2 \dots m - n = \frac{a^2 - b^2}{m + n} = \frac{a^2 - b^2}{2x}$$

$$\therefore m = x + \frac{a^2 - b^2}{4x} = x + \frac{150}{x} \quad \text{Similarly } p = x + \frac{c^2 - d^2}{4x} \text{ and we have}$$

$$m - p = \frac{a^2 - b^2}{4x} - \frac{c^2 - d^2}{4x} = \frac{(a^2 + d^2) - (c^2 + b^2)}{4x} = 0, \text{ if } a^2 + d^2 = b^2 + c^2.$$

Hence $m = p$ and the diagonals cross at right angles. We may easily find $OB = x + \frac{a^2}{2x}$. Then $OB^2 + m^2 = (x + \frac{a^2}{2x})^2 + (x + \frac{a^2}{2x})^2 = 1225$, from which we may find $2x^2 = 718.2145$, the area of the quadrilateral, and $2x = 37.90025$ rd., the diagonal.

HENRY GUNDER, *North Manchester, Ind.*

[28] Complete the cone. Its height will be 60 ft., and the height of the part added 40 ft. The volume added is to the whole cone as $40^3 : 60^3$, or $8 : 27$, and the frustum is $\frac{1}{27}$ of the whole cone. Adding $\frac{1}{2}$ this to the part added to complete the cone, and we get a cone whose volume is $\frac{1}{27}$ of the whole cone. Therefore by similar solids $\sqrt[3]{\frac{1}{27}} : \sqrt[3]{1} :: 40 : 10\sqrt[3]{140}$ = the height added + height of half the frustum, and $10\sqrt[3]{140} - 40 = 11.926$ ft., height of upper part, and 8.074 ft., the height of lower part. Id.

[36] The first newspaper was that of ancient Rome, known as *Acta Publica*. Later it was issued as a daily. The first modern newspapers were the *Relationen*, and *Neue Zeytung*. The first English newspaper was in the reign of James I. The first permanent paper in the United States was the *Boston News Letter* in 1704.

JAMES T. HOOD, *Point Isabel, Ind.*

[37] 6 men for 1 hour = 6 hours' work for 1 man. 11 men for $\frac{1}{3}$ hour = $3\frac{2}{3}$ hours' work. Therefore $6 - 3\frac{2}{3} = 2\frac{1}{3}$ hours' work runs on in 40 min ($\frac{2}{3}$ hour). Hence it will take $2\frac{1}{3} \div \frac{2}{3} = 3\frac{1}{2}$ men to keep the running coal shoveled off. And $6 - 3\frac{1}{2} = 2\frac{1}{2}$ hours' work was on the dock at commencement. When 4 men work it takes $3\frac{1}{2}$ men to shovel off the coal running on, which leaves $\frac{1}{2}$ man to shovel off $2\frac{1}{2}$ hours' work, or $2\frac{1}{2} \div \frac{1}{2} = 5$ hours' work. Hence 4 men in 5 hours clear the dock.

HENRY GUNDER, *North Manchester, Ind.*

[38] Frederick the Great, of Prussia, presented a sword with this inscription to General Washington.

ELTON BROUGHTON, *Wolcottsville, Ind.*

[39] Burgoyne surrendered with the promise of a free passage for himself and command across the Atlantic. I think no American was exchanged for him.

ED. M. GOODRICH, *Wilmington, Ind.*

[40] Draw a square 10 by 10 rods, and find its diagonal, which is 14.14214; from this subtract the diameter of one of the circles, 10 rods, and have left 4.14214 rods, the diameter of the required circle.

T. E. COLLINS, *Knox, Ind.*

[41] The cold air being heavier, seeks the lowest points; hence the valleys are colder than the elevations.

RABENF.

[42] $5,000 \times 216 = 1,080,000$ pages in all the books. 18mo. = 36 pages in one sheet; then $1,080,000 \div 36 = 30,000$ sheets required, which is $\frac{1}{28}$ of the whole amount used, or 65 reams, 15 quires, and 19 sheets.

E. P. NORTON, *Allen, Mich.*

CRITICISM.

C. E. Edwards, Supt. of Blackford county, thinks the 7th solution, page 618, October Journal, is incorrect, and the answer should be 12 or 24, instead of 10. We think so too.

B. F. Allen, Cloverdale, Ind., objects to answer No. 3, page 682, November Journal, but does not state his objection.

NOTES.—Study the solution of No. 18, by Prof. Gunder. Several excellent solutions of this problem came in, but were too long for publication. It is from Bonnycastle's Mensuration, and is a fine problem.

CREDITS.

E. —, River, Ind., 40, 42; — —; Scottsburg, Ind., 36, 39, 40, 42; P. H. Bolinger, North Manchester, Ind., 33, 36, 37, 39, 40, 42; J. L. Crouse, Alexandria, Ind., 18, 31, 17, 28, 23, 25, 29, 35; Jas. B. Shaw, Jr., La Fayette, Ind., 24; T. W. Shimp, Salamonina, Ind., 37, 38; — Wilson, Wright's Corner, Ind., 40, 42; T. R. Morrison, M. D., Churubusco, Ind., 23; Robert Core, Waverly, Ind., 40; C. R. Perrin, Alpine, Ind., 40; "Thai," La Fayette, Ind., 28; Edgar White, Trafalgar, Ind., 24, 23, 27, 28; C. E. Mains, Metamora, Ind., 26, 27, 32, 33; E. Broughton, Wolcottsville, Ind., 38, 40; Rabenf, New Providence, Ind., 28, 36, 40, 41, 42; S. W. Keller, Danville, Ind., 30, 32, 33; G. L. Wade, Springfield, Ind., 32; E. D. Porter, 36, 40; D. E. Smith, Decatur, Ind., 36, 38; Will Hammond, Zulu, Ind., 40; O. M. Given, Florence, Ind., 28; T. M. Butler, Ekin, Ind., 29; C. L. Cravens, Elmore, Ill., 24, 26, 32, 33, 34, 30; C. E. R., Edinburg, Ind., 26, 30, 32, 33; James F. Hood, Point Isabel, Ind., 36, 39, 42; Benton Miller, Ewing, Ind., 26, 31, 33; Samuel Wertz, Columbus, Ind., 36, 39, 30, 32; T. B. Bartholomew, Whiteland, Ind., 23, 30; M. M. M., Walton, Ind., 32; U. S. C., Honey Creek, Ind., 26, 27, 30, 32, 33, 34; P. A. Yoder, La Grange, Ind., 23, 32; Ida A. Marot, North Star, O., 30, 32; E. M. Inman, Roll, Ind., 32; George E. Williams, Cornettsville, Ind., 23, 24, 26, 30, 32, 33, 34; Frank English, Van Buren, Ind., 23, 26, 27, 31, 33, 34; Elmer Zeigler, Remington, Ind., 30, 32; E. P. Norton, Allen, Mich., 18, 23, 24, 28, 29, 40, 42; M. G. Garard, Kelseyville, Ind., 23, 26, 29, 30, 33, 34; C. O. Du Bois, Moore's Hill, Ind., 26, 27, 33, 34; John A. Morrow, Charlestown, Ind., 18, 14, 30, 22, 3, 20, 29, 23, 32, 28.

Send in your solutions, friends: we try to select the best ones, and give credit to all. If we have omitted any let us know.

J. L. Crouse and John A. Morrow sent excellent solutions for No. 18, but they were too long for publication.

Prof. Gunder's solution is better than that of the author himself.

MISCELLANY.

UNION CITY.—Schools reported in excellent condition, under the direction of Jas. R. Hart.

CARROLL COUNTY.—Supt. J. L. Johnson has sent out a circular full of good suggestions, to his teachers and trustees.

THE MANUAL of the Decatur Co. schools, J. W. Jenkins, Supt., is full, and makes a very satisfactory exhibit of the condition of the schools.

KOSCIUSKO COUNTY.—Supt. E. J. McAlpine has issued a *Manual* which contains many good suggestions and much valuable information. The showing for the schools is certainly good.

THE CITY SUPERINTENDENTS' ASSOCIATION OF OHIO AND INDIANA will meet in Union City, Indiana, on Thursday, December 15th, and continue during the 16th and 17th. Let there be a full attendance.

WASHINGTON.—These schools are reported on the up grade under the supervision of W. F. Hoffman. The "Report" recently issued shows that the main features of the schools are all right, and that there is progress being made, which is always a good indication.

THE DECATUR COUNTY Teachers' Association, held October 22, was an event to be remembered. It was the occasion of State Supt. La Follette's first visit to the county, and his addresses were highly appreciated. County Supt. Jenkins is taking hold of his work with a good grip.

HUNTINGTON.—Schools are moving on smoothly with a large enrollment. An addition to one of the school buildings has just been completed and gives increased room, which was much needed. Superintendent R. I. Hamilton is evidently keeping these schools up to their high standard.

LA GRO.—The high school recently gave an entertainment which realized \$92. This sum will go to swell the school library, which already numbers 450 volumes, all purchased by money raised by school entertainments within the last two years. H. F. Wilkie is the Supt. "Where there is a will there is a way:" "Go thou and do likewise."

STEBEN COTNTY.—The institute, which began November 7, was largely attended as usual, and a good judge who has had large observation reports it not only "the best ever held in the county," but one of the best he ever attended anywhere, and he has attended hundreds. W. W. Parsons, of the State Normal, was the chief worker, and he was ably seconded by others. A public lecture was given every night.

Supt. R. V. Carlin is a good worker and knows how to "enthuse" an institute.

THE SUPERINTENDENTS' CONVENTION of Indiana, Illinois, and Kentucky met at Jeffersonville, October 21. R. W. Wood was elected chairman and E. E. Olcott secretary. The attendance was not large, but the discussions were very profitable. The convention was decided to be "the best ever held." The next meeting will be held at Madison, Ind., in February.

WAYNE COUNTY.—B. F. Wissler, the new county Supt., has taken hold with a vigorous grip. He has published the first "Annual Announcement" of the schools, which contains one or two novel features. For example, in addition to the names and addresses of all teachers, both county and city, the length of each license is given, with the date of its issue. The date of holding the county institute for 1888 is also given, with the names of all the instructors.

PURDUE UNIVERSITY.—A recent visit to this institution found every thing in excellent working trim. Everything is working in perfect harmony, the new members of the faculty having fallen into their places and done their work so well that the trustees are not only satisfied but gratified. While some of the new men are not quite equal to the persons whose places they take, others are superior and the general average makes the present faculty fully equal to the one of last year. Several of the departments have been very much strengthened by the addition of new appliances, notably the chemical laboratory, which is now one of the best in the United States.

The investigations being made in the agricultural and horticultural departments concerning insects that destroy grains and fruits are likely to result in a saving of millions of dollars to the state.

A special term, to begin January 4, should be attended by hundreds of young men who are interested in farm work. It will include instruction on all the common diseases of horses, cattle, sheep, etc., with directions as to how to treat the diseases, and to care for the stock; on breeding animals, soils, drainage, grafting, oat smut, wheat rust, diseases of apples, diseases of potatoes, insects that trouble corn, grains, orchards, gardens, etc.

This term's work will certainly be worth ten times its cost to young farmers. For particulars address Pres. J. H. Smart, La Fayette, Ind.

STATE BOARD OF EDUCATION.

The State Board of Education met in the office of Supt. of Public Instruction, October 31 to November 2, and transacted considerable business. The following high schools were commissioned:

Anderson, Attica, Bloomfield, Butler, Cambridge City, Decatur, Dublin, Edinburg, Franklin, Garrett, Greencastle, Hagerstown, Huntington, Kendallville, Ligonier, La Gro, La Grange, Lawrenceburgh,

Lebanon, Liberty, Lima, Marion, Mishawaka, Mitchell, Muncie, New Castle, North Vernon, Orleans, Pendleton, Shelbyville, Spencer, Williamsport, and Worthington.

The following order was made concerning State and Professional Licenses:

"The examination for Professional License shall include the following branches: Algebra, Civil Government, Grammar, American Literature, Science of Education, and two of the following three branches—Elements of Physics, Elements of Botany, or Latin (Latin to include Latin Grammar, two books of Cæsar and two of Virgil.)

The examination for State License shall include, in addition to the branches required for Professional and Common School License—Geometry, Rhetoric, General History, English Literature, Physical Geography, and two of the following three subjects: Geology, Chemistry, or Zoology."

The following were appointed visitors to the State Normal School: Dr. J. S. Irwin, Supt. of Ft. Wayne Schools; Calvin Moon, Co. Supt. of St. Joseph county; and Dr. Richard Edward, State Superintendent of Illinois.

State Supt. La Follette represented that one hundred (100) dollars had been received from twenty applicants for State License by him, and the same had been paid into the state treasury.

The moneys received for a memorial to Milton B. Hopkins were voted toward furnishing an alcove in the State Normal School,—the trustees of said school contributing a like amount—to be known as the Milton B. Hopkins Memorial.

The next meeting of the board will be held at La Fayette, January 10, 1888.

NATIONAL EDUCATIONAL ASSOCIATION.

SAN FRANCISCO, October 13, 1887.

TO HON. AARON GOVE, *Pres. Nat. Ed. Association*:

Dear Sir: Pursuant to notice, a committee, appointed last evening to represent the citizens of San Francisco, met and organized by electing Mayor Pond as Chairman. The following memoranda were unanimously agreed upon:

First—The people of San Francisco most cordially endorse and emphasize the invitation already extended to you by the Legislature of California, the Board of Education of San Francisco, and the various local boards and other educational bodies of this state and coast, to hold the next session of the National Educational Association in this city.

Second—We hereby guarantee to provide, free of cost to the Association, all required rooms and halls to be used for general, special, and department meetings.

Third—To pay all expenses connected with printing and mailing one hundred thousand copies of a 16-page bulletin, similar to that used in 1887,

Fourth—To secure a membership of at least two thousand from the state, and in addition, to obtain a good number of Life Members and Life Directors.

In regard to transportation, we have to say that half-rates have already been secured on the railroads west of Chicago, and negotiations are now in progress, with every prospect of success, to secure the same terms over the roads east of Chicago.

Concerning arrangements necessary for the comfort, enjoyment, and convenience of our guests, it is not possible at this time to be more specific than to say that nothing shall be left undone to make them complete in every respect.

Your obedient servants,

E. B. POND, *Chairman.*

JOS. O'CONNOR, *Secretary.*

REPORT OF THE NORTHERN IND. SUPERINTENDENTS AND TEACHERS' ASSOCIATION.

The meeting of this association took place at Michigan City, Nov. 4-5. The meeting was well attended and was of more than ordinary interest. S. E. Miller, Supt. of the Michigan City schools, was president, and Mary Bassler was secretary. Supt. Du Shane, of South Bend, responded happily to Pres. Miller's hearty welcome.

"History in the Public Schools" was ably treated by F. C. Hicks, principal of the La Porte high school. A class exercise in Music, by Prof. Kurtz, showed good method and good results, and was interesting. J. C. Black, Supt. at Logansport, discussed the exercise, emphasizing the importance of holding boys to the musical exercises.

"Incentives to Study," by Supt. Hailman, of La Porte, proved a very instructive theme. The speaker would lead and not drive pupils, and do this without comparing scholarship and thus arousing envy. E. E. Smith, of Chicago, and Supt. Du Shane engaged in this discussion.

Supt. W. H. Sims, of Goshen, opened the discussion on "How to Give Instruction in Morals," and made many practical suggestions. He was followed by Hailman, Forbes, and Voorhees.

The lecture Friday evening by Geo. Howland, Supt. of the Chicago schools, on "The Recitation," was well received and highly appreciated.

"Shall Examinations be Held at Stated Times?" was discussed with much enthusiasm, Supt. Du Shane leading and taking the affirmative side of the question. A large number spoke on this subject.

Miss Chandler, principal of Goshen high school, favored unannounced examinations, claiming thus to avoid nervous excitement. Supt. Hailman did not favor written examinations for incentives to study, or for promotion. Each recitation should be an examination. Supt. Black would leave teachers free to hold examinations at any time. He requires two a year. Co. Supt. Reddick favored class records as more satisfactory than examination records. Prin. Hicks condemned written examinations for records as interfering with the true object of school work, but would give written tests to teach pupils to make a summary of knowledge on subjects when completed. Alex. Forbes called attention to the difference between the objects of the recitation and the examination. Teaching has for its main purpose, assisting pupils to gain knowledge, while the main purpose of the examination is the testing of work done, as to whether it is satisfactory. Miss Bassler held that written examinations were the best possible tests of accuracy of statement, and that nothing could take their place in this regard.

"The Utility of Public Rhetorical Exercises" was well presented by Supt. Voorhees, of Crown Point.

The feasibility of inviting the Northern Indiana Teachers' Association to meet with the Northern Indiana Superintendents and Teachers' Association was discussed and agreed upon. The next meeting will be held in Logansport.

The officers elected were: J. C. Black, president; — Voorhees, vice-president; Miss Belle Kennedy, secretary; Calvin Moon, treasurer. Ex. Com.: J. C. Black, W. C. Belman, C. H. Bartlett.

READING CIRCLE NOTES.

We hope to publish the exact membership of the Reading Circle in January.

The Secretary has received several orders for books, which he has promptly filled for those requesting it.

Supt. Robinson informs us that the Reading Circle in Gibson county now numbers 114, instead of 80, as reported last month.

Decatur county has organized a Reading Circle of 110 members,—and they are working in good earnest. More than 100 sets of books have been ordered.

FRANKLIN COUNTY.

Questions for October—Lights of Two Centuries.

1. What new style of painting was originated by Watteau? Explain what is meant by "The Idealized Landscape."
2. Who was the greatest of English Portraitists? The English Moral Painter? The Sculptor of Venus and the Graces?

3. Give the important facts in connection with the emblematic *Lion of Lucerne*. Name two characteristics of its sculptor.

4. Explain what is meant by "Pointing." Who was the inventor? What is its value?

5. What noted literary characters were associates of Reynolds? Why were many of Reynolds' paintings not durable?

Psychology—(Sully.)—1. What is empirical knowledge? Define education as an *art*; as a *science*.

2. Of what elementary truth of human nature were the ancients ignorant?

3. What does the author believe should be universally sought in education?

4. What are the two principal uses of mental science to a teacher?

5. By what two methods do we gain a knowledge of the mind? Define them and give their relative importance.

6. By what two ways may there be over-stimulation of the brain? What relation do these bear to development and growth?

7. What are the two primary functions of all mental operations? Define each.

8. Define analysis and synthesis.

9. Name the different ways in which the growth of knowledge may be viewed; the improvement of a faculty.

10. What is the general law of mental growth? What inference should a teacher draw from this?

Please answer and send MSS. to County Superintendent. Your papers will be graded and the results given you.

The greatest benefit comes from systematic reading. This is one leading purpose of the Reading Circle Work. Let us as fellow-teachers and co-workers, resolve to pursue the course prescribed diligently and conscientiously. Fraternalty yours, A. N. CRECRAFT.

A VISIT TO A SOUTHERN INDIANA READING CIRCLE.

"Which slip shall I draw?"

"Will the Fates be kind to me, I wonder?"

"Hogarth! the only one I know nothing about!"

"But see! I have drawn Canova, and all I can remember is the story of the butler lion!"

This conversation took place in a pretty, brightly-lighted parlor, with books on the table, a piano, stacked high with music, and pictures—soft, beautiful water-colors, work of the artistic members of the family—on the walls.

Eight teachers, all women, grouped about a boy whose hands are full of slips of paper, all eight in pretty attitudes of expectation which change to those expressive of delight or despair upon glancing at the slips which they have drawn.

In the background lurks one masculine figure, crushed into silence, perhaps, by too much femininity in the atmosphere,—the County Superintendent, genial, good-natured, willing to speak when the ladies will allow him, and trained by a former year's experience to hold a respectful silence when they wish it,—for in *his* Circle their will is law.

Promptly at seven the President (this is the only bit of formality they allow themselves) taps on the table, and the silence for a few short minutes is unbroken. Then, calling on each in turn she receives such responses as the following:

From a business-like looking girl with short hair and a stiff collar, "Method is the hinge of business."

From one whose hazel eyes look far away, and who has decided artistic tastes:—

"Longing is God's fresh heavenward will
With our poor earthward striving.
We quench it that we may be still
Content with earthly living.
But would we learn that heart's full scope
Which we are hourly wronging,
Our lives would climb from hope to hope
And realize our longing."

And from another wicked-looking damsel: "There is no so good man, who so squares his thoughts and actions to the world, that he is not faulty enough to deserve hanging ten times over in his life."

This preliminary over the president calls upon the three leaders—one of Psychology, another of the "Lights of Two Centuries," and a third of Green's History—for this Circle intends to finish the English History—and each in turn displays an innocent-looking handful of slips of paper which she presents to the convenient youth who attends this Circle with his mamma.

There is observable a great deliberation in choosing, a large amount of speculation as to what may be on the other side of the slip of paper, and a certain amount of groaning when the slips are drawn. Another tap from the president, who has enough enthusiasm for half a dozen Reading Circles, recalls each member to her duty and each announces the chapters, names, and outlines on her slips of paper.

Number one begins with fear and trembling a chapter of the Psychology, gathering courage as she proceeds. Number two thinks of something more; a third has a different arrangement of the subject taken from another book, and presents it; a fourth differs with Sully (irreverence of womanhood!). The superintendent is called upon and expresses his opinion, and in a short time the whole circle is engaged in an animated discussion.

The Psychology is over and the "Lights" taken up. Some unfortunate has Hogarth, and tells what she knows of him. Straightway the

artist produces a copy of one of his pictures—some one else can add some story not mentioned by Hale.

Then the History is called for and taken up in the same manner.

The president called the Circle to order at seven o'clock, it is now nine. *Promptness* is the motto of the teachers.

There is a tradition that the members go home at nine o'clock, immediately after dismissal, but it is a fact that they never do.

Go home! Four of them are in a corner, heads together, more like school *girls* than school *teachers*, laughing over some story which one is telling. Two are at a table having a lively discussion over Browning,—some disputed point which neither can settle. For one-half of this Reading Circle has organized a Browning Club, determined to find out "what Browning meant. Another leans over the piano listening to the sweet strains of "Rubenstein's Melody in F" as interpreted by the musical member; while the county superintendent in the middle of the room diffuses his genial presence over all.

The clock strikes ten! Immediately the group in the corner breaks up as if by magic; the copy of Browning is thrown aside; there is a frantic rush for wraps, hurried promises to meet again in two weeks, and all disappear, followed by the strains of Loeschhorn's "Good Night," by the musical member, at whose pleasant home we have been entertained.

KATE MILNER, *Rockport, Ind.*

INDIANA STATE TEACHERS' ASSOCIATION.

XXXIV Annual Session—To be held at Plymouth Church, Indianapolis, December 28, 29, and 30, 1887.

GENERAL PROGRAM.

WEDNESDAY, DEC. 28, 7:30 P. M.—1. Address of Retiring President, C. W. Hodgin, Earlham College. 2. Inaugural Address, President-elect, Mrs. Emma Mont. McRae, Purdue University. 3. Miscellaneous Business.

THURSDAY, 9 A. M.—1. Opening Exercises. 2. Paper: "Needed Changes in the School System of Indiana," Jas. A. Woodburn, State University. 3. Discussion: Opened by George F. Felts, Supt. Allen County schools. 4. Recess. 5. Paper: "Literary Work in the Grades," Lizzie S. Byers, State Normal School. 6. Discussion. 7. Music. 8. Noon Intermission.

Afternoon, 2:00.—1. Appointment of Committee on Officers. 2. Paper: "Educational Psychology," Victor C. Alderson, Prin. Englewood High School. 3. Discussion: Opened by Miss N. Cropsey, Supt. Primary Instruction, Indianapolis schools. 4. Music. 5. Recess. 6. Paper: "Teachers' Reading Circle," C. W. Thomas, Harrison Co. schools. 7. Discussion: Opened by L. E. Smedley, Supt. Put-

nam Co. schools. 8. "Children's Reading Circle," Joseph Carhart, De Pauw University. 9. Adjournment.

Evening, 7:30.—Lecture: David Swing, Chicago. When a member of the Association pays his annual fee, he receives a free ticket to the lecture. Others will be charged an admission fee of 50¢.

FRIDAY, 9 A. M.—1. Opening Exercises. 2. Paper: "The True Test of Excellence in a School System," W. N. Hailman, Supt. La Porte schools. 3. Discussion: Opened by J. J. Mills, Pres. Earlham College. 4. Music. 5. Recess. 6. Paper: "The Teacher as an Investigator," Miss Lillie J. Martin, Indianapolis High School. 7. Discussion: Opened by James R. Hart, Supt. Union City schools. 8. Music. 9. Noon Intermission.

Afternoon, 2:00.—1. Reports of Committees. 2. Miscellaneous Business. 3. Music. 4. Adjournment.

SPECIAL PROGRAMS.

COLLEGE ASSOCIATION.

The following is the program of the Indiana College Association for the next meeting, Monday and Tuesday, December 26-27, as far as completed:

1. Annual Address of the President, Pres. W. W. Parsons, Indiana State Normal School.
2. "Æsthetics," Miss Mary Edith Orr, Professor of Art and Modern Languages, Coates College.
3. "The Educational Value of the Study of the Classics," Prof. Thomas J. Bassett, De Pauw University.
4. "Sociology as a College Study," President J. J. Mills, Earlham College.
5. "The Laboratory Method in Teaching History," President W. S. Stott, Franklin College.
6. (Subject to be selected), Prof. A. H. Young, Hanover College.
7. "The Relations of the Church and the State in the Work of Education," President C. H. Kiracofe, Hartsville College.
8. "Collegiate Instruction in Biology," Dr. J. S. Kingsley, Indiana University.
9. "Descriptive Geometry as a Disciplinary Study," Prof. C. A. Waldo, Rose Polytechnic Institute.
10. (Subject to be selected), Prof. E. R. Lewis, Wabash College.
11. "Biology in the College Course," Prof. C. W. Hargitt, Moore's Hill College.

HIGH SCHOOL SECTION.

WEDNESDAY, DEC. 28, 9 A. M.—1. "What Degree of Liberty should characterize the Discipline of High School Pupils?" Supt. P. A. Alle Bluffton. Discussion: Miss Maggie Lawrence, Goshen.

2. "To what Extent should High Schools be Preparatory to Colleges?" Prin. David K. Goss, Rochester. Discussion: Mrs. David Curry, Greensburg.

3. "On Teaching Literature," Mrs. Lois G. Hufford, Indianapolis. Discussion: R. A. Ogg, Supt. Greencastle schools. Noon.

4. "Thoroughness," Mrs. B. G. Cox, of Kokomo. Discussion: Prin. Chas. E. Newlin, Frankfort.

5. Competitive Papers.

Papers limited to twenty-five minutes; opening discussions to ten minutes.

W. W. BYERS, *Pres.*, Terre Haute.

E. E. GRIFFITH, Frankfort, }

H. G. WOODY, Kokomo, } *Ex. Com.*

INSTITUTE INSTRUCTORS' ASSOCIATION.

There will be held, in connection with the State Teachers' Association, upon Wednesday afternoon, Dec. 28, a session of the instructors in county institutes. This meeting is held in conformance with the action of the State Board of Education at its recent meeting. It is the design to form a permanent association, or State Institute, with a view to secure and properly direct the continued progress and uniform improvement of the institute work of the state. The association will remain under the direction of the State Board of Education. At its first session papers will be read by President Parsons of the State Normal, Prof. Tompkins of De Pauw University, and Mrs. Eudora Hailman, Principal of the La Porte Kindergarten Training School. A large attendance and interesting meeting is anticipated.

COUNTY AND VILLAGE SECTION.

(No program received.)

RAILROAD RATES.—Reduced rates will be given to members of the Association on the following terms: (1) They must purchase a full fare ticket to Indianapolis. (2) They must obtain of the same agent, a certificate stating that they paid full fare going. *Members must have these certificates, or pay full fare both ways.* Certificates stamped by the home agent and signed by N. Yoke, Railroad Secretary, at Indianapolis, will secure return tickets upon payment of one-third fare.

Members should inquire of their agent, at least one week before the meeting, as to whether he has on hand the certificates that will secure reduced rates. If he is not supplied, request him to obtain a supply at once from the proper officers of his road.

In case the agent can not sell a through ticket to Indianapolis, members will purchase to the nearest point where such tickets can be obtained, and there re-purchase to Indianapolis, obtaining certificates from both agents of whom tickets were purchased.

HEADQUARTERS will be at the Grand Hotel. Rates \$2.00 a day.

PERSONAL.

F. S. Morganthaler is serving his second year as principal at Huntingburg.

G. B. Haggett, of Ohio, has been elected Supt. of the Corydon schools, to take the place of J. P. Funk, removed to New Albany.

Mr. Mees, Professor of Chemistry and Physics in the Ohio University, has accepted a professorship in the Rose Polytechnic Institute, at Terre Haute.

Hiram Hadley, one of Indiana's oldest and most efficient school men, has given up his position as principal of Bloomingdale Academy and gone to Las Cruces, New Mexico, for permanent residence.

Geo. F. Bass, of Indianapolis, editor of the School Room Department of the Journal, is responding to a large number of calls this winter to deliver his humorous lectures on "Gumption" and "Humor."

F. C. Osborn, with headquarters at 180 Wabash Ave., Chicago, now represents Ginn & Co. as agent for Indiana. Mr. Osborn is a gentleman of culture and pleasant bearing, and will be well received by Indiana teachers.

Geo. P. Brown, well and favorably known in Indiana, has more than doubled the subscription list of the *Illinois School Journal* since he took charge of it a year ago. He is making one of the best educational journals in the country, and deserves abundant success.

Prof. Geo. B. Loomis, for many years Supt. of Music in the Indianapolis schools, and author of a popular series of singing books for graded schools, died of typhoid fever Nov. 27. Prof. Loomis's christian character, personal integrity, and kindly bearing were noteworthy, and drew to him a large circle of friends who deeply mourn his loss.

Mrs. Emma L. Bloss, wife of ex-State Supt. John M. Bloss, died October 26, at her new home in Topeka, Kan. Mrs. Bloss had been in ill health for some time, and it was hoped that a change of locality might do her good, but it did not. She was a lady of estimable christian character and beloved by all who knew her. Prof. Bloss will have the sympathy of his hosts of Indiana friends in this his sad bereavement. It is gratifying to notice that although a comparative stranger, he had every attention that the Topeka teachers and other friends could bestow.

BOOK TABLE.

THE AMERICAN EDITION OF THE ILLUSTRATED LONDON NEWS, published in New York City, is a valuable weekly paper.

THE PRINCIPLES OF THEORETICAL CHEMISTRY: By Ira Remsen. Philadelphia: Lea Brothers & Co.

The demand for a third edition of a somewhat popular presentation

of theoretical chemistry proves that this subject is appreciated. Theoretical chemistry directs, or at least suggests so much of the chemical work that is done that even the teacher of those just beginning chemistry will find this book helpful.

ST. NICHOLAS FOR YOUNG FOLKS.—Since its first issue, in 1873, this magazine has maintained, with undisputed recognition, the position it took at the beginning,—that of being the most excellent juvenile periodical ever printed. The fifteenth volume began with November, and promises to be an improvement on all its predecessors. A long list of the ablest writers in the country have been secured. Published by the Century Co., New York City.

With the November, 1887, issue, *THE CENTURY* commences its thirty-fifth volume with a regular circulation of almost 250,000. The War Papers and the Life of Lincoln increased its monthly circulation by 100,000. The latter history having recounted the events of Lincoln's early years, and given the necessary survey of the political condition of the country, reaches a new period, with which his secretaries were most intimately acquainted. A novel by Edward Eggleston, author of the "Hoosier School Master," will run through the volume just begun—The Century Co., New York City.

HARPER'S MAGAZINE for Christmas abounds in good poetry, most of it beautifully illustrated by well-known artists. Edwin A. Abbey furnishes ten pictures for "The Vicar," by Præd, and Gilbert Gaul has done some excellent work for "The Convict's Christmas Eve," by Will Carleton. One would have guessed it was Carleton's pen that wrote these verses, even if his name were not given. Then Andrew Lang tells of "Another Way," which is not Matthew Arnold's, and William Black translates a bit of Heine in a way that loses for us none of Heine's love-sweetness. And what is really a Christmas carol is sung by Harriet Lewis Bradley, of "St. Anthony of Padua." Harper & Bros., New York City.

CLASSICS FOR CHILDREN—A PRIMER: *Boston: Ginn & Company.*
F. C. Osborn, Chicago, Agent for Indiana.

This is the second of a series of books to precede a First Reader. The first, called a classic primer, draws from the store of nursery classics, and endeavors to carry children as rapidly as possible through the first difficulties in reading; this, the second, seeks to provide a perfectly graded succession of lessons and to gain preeminence among works of its class by careful arrangement and by a natural sequence in words and ideas. Script is introduced as the lessons grow more difficult. The mechanical execution of the book is admirable. The pictures are delightful, and the print is perfect. Taken as a whole it is a "thing of beauty."

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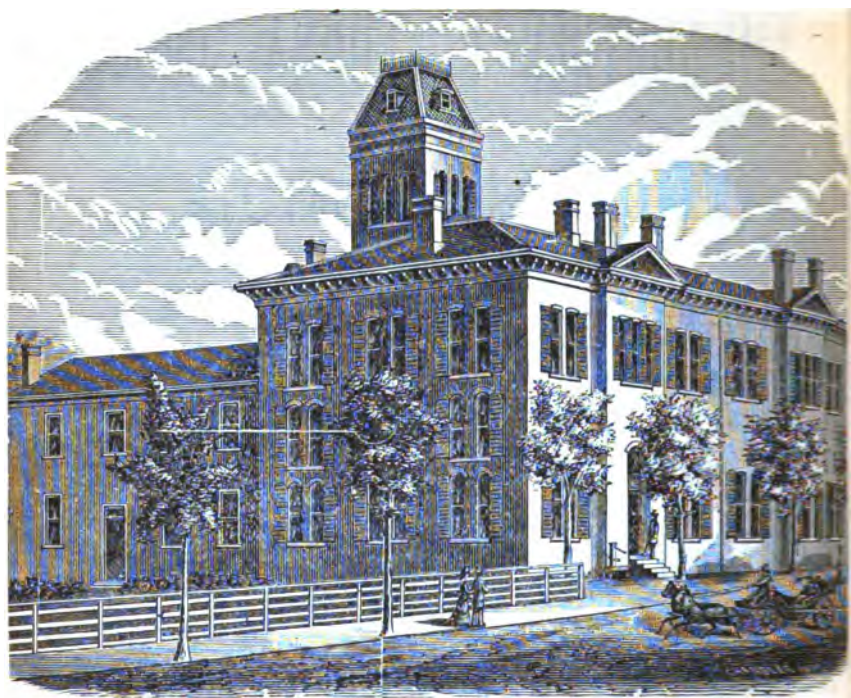
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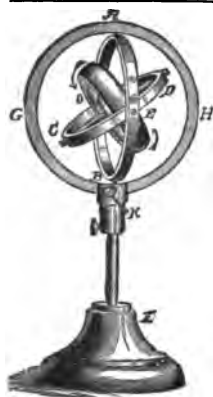
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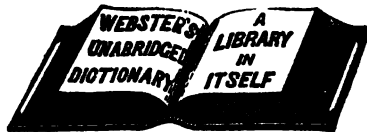
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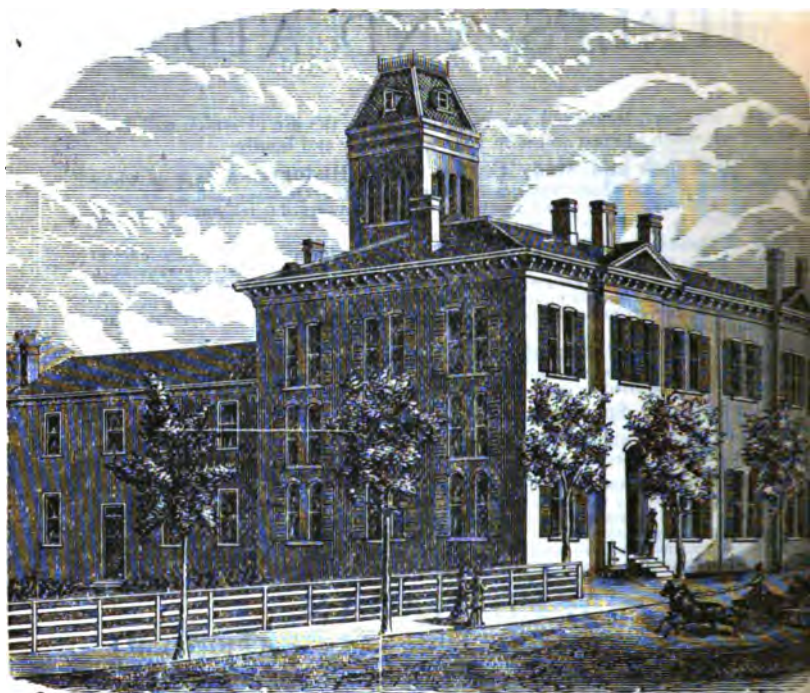
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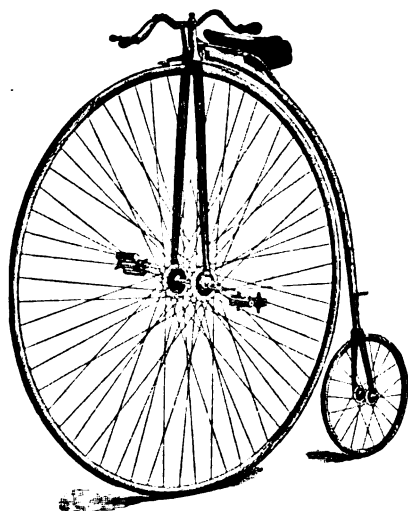
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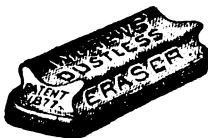
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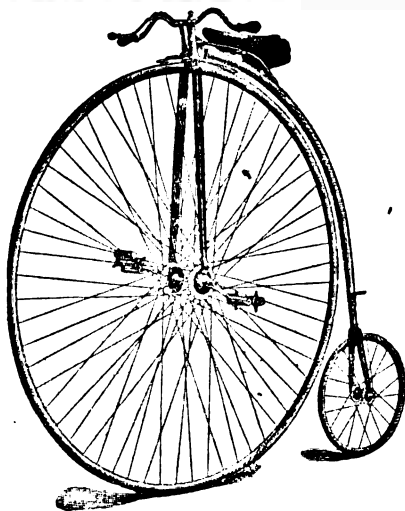
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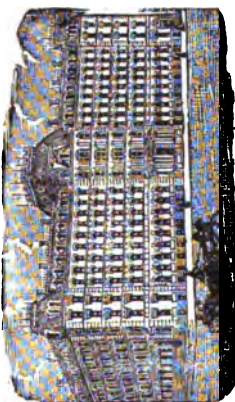
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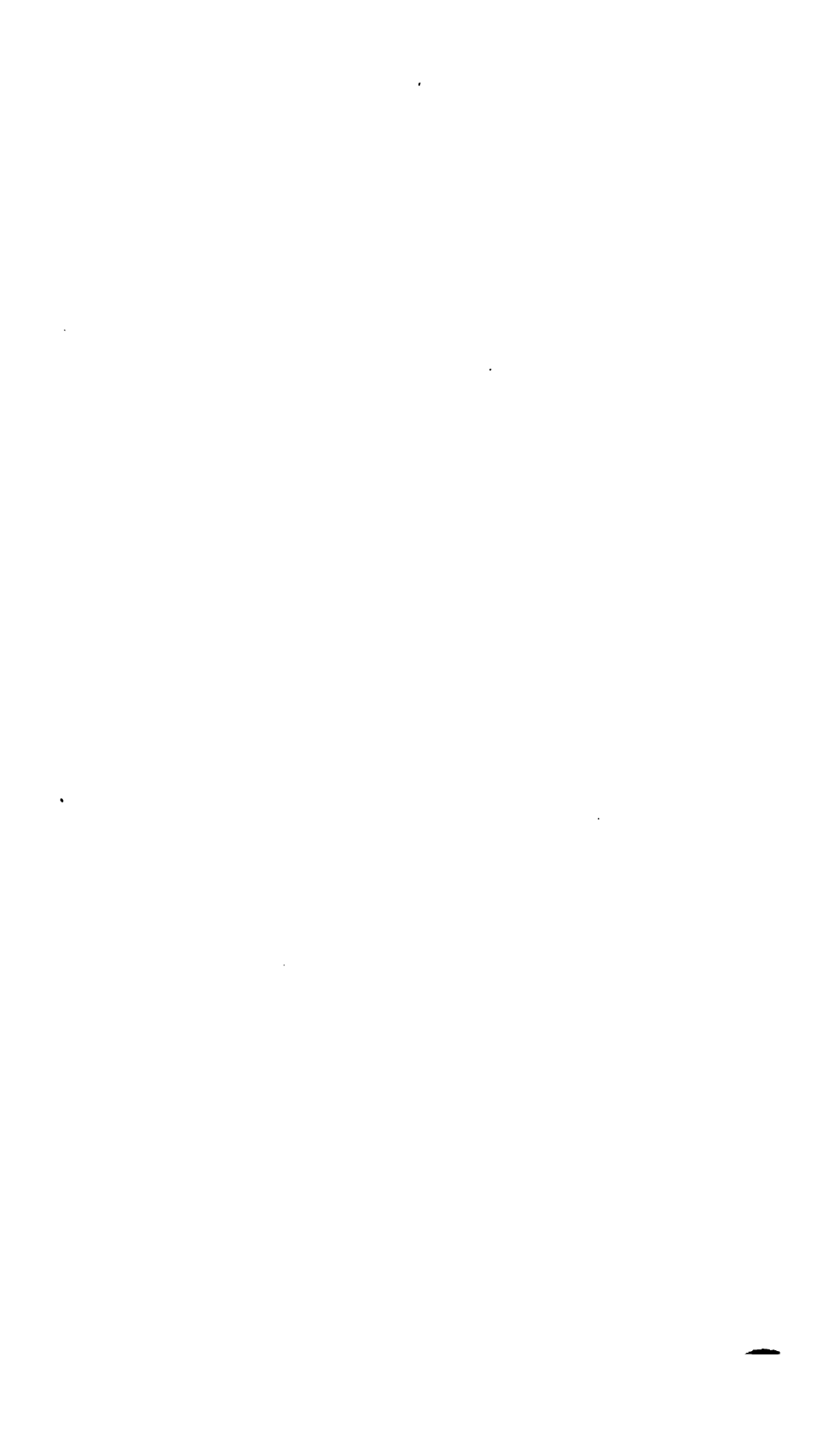
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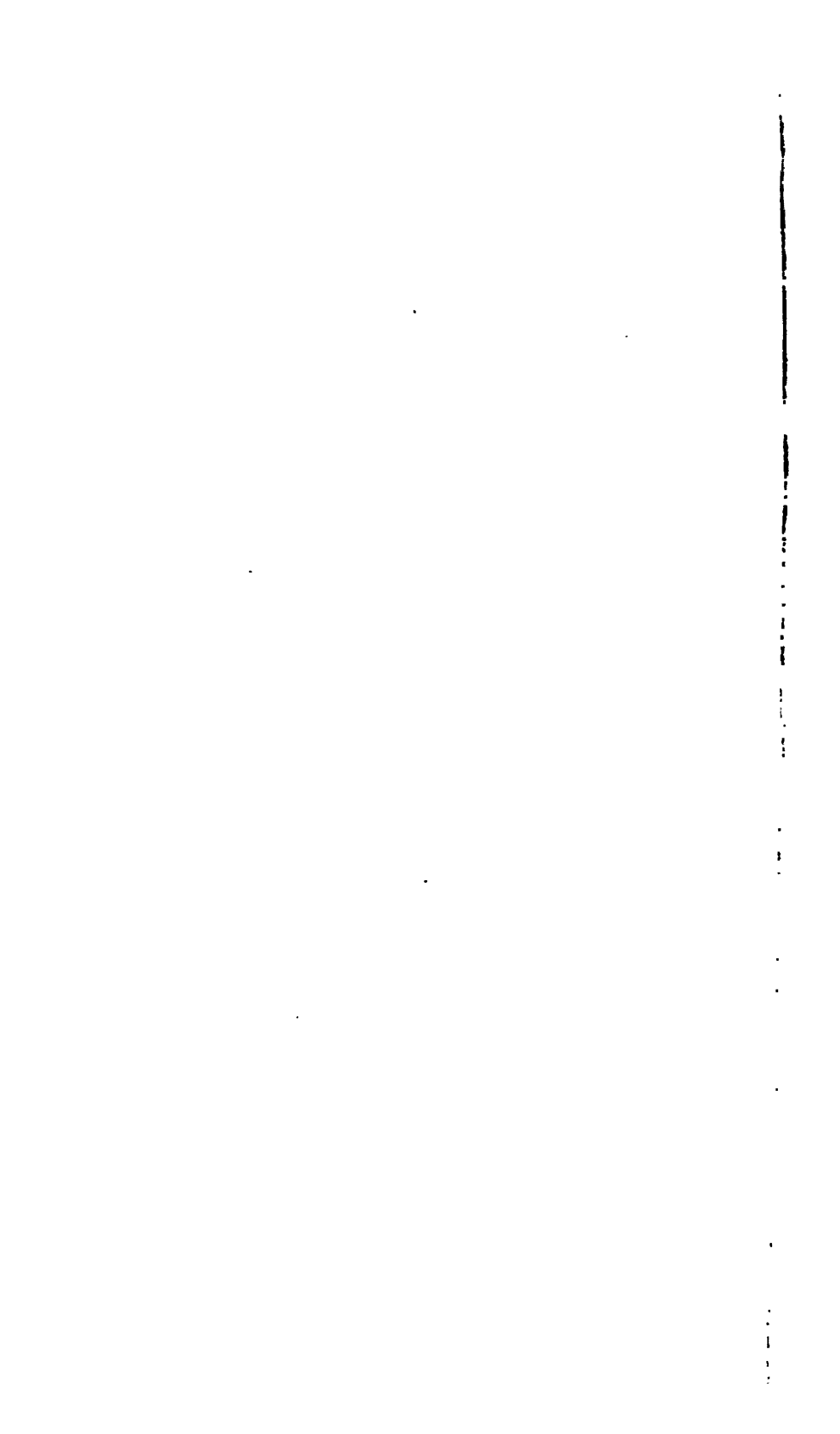
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